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The Lumleian Lectures

ON

SOME MODERN THEORIES CONCERNING HYSTERIA.

Delivered before the Royal College of Physicians of London on March 19th, 24th, and 26th, 1914,

BY J. A. ORMEROD, M.D. OXON., F.R.C.P. LOND.,

REGISTRAR TO THE COLLEGE; CONSULTING PHYSICIAN TO ST. BARTHOLOMEW'S HOSPITAL AND TO THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, QUEEN SQUARE.

LECTURE I.

Delivered on March 19th.

MR. PRESIDENT, FELLOWS, AND GENTLEMEN,—The first part of my task, and a most pleasant part, is to thank you, Sir, and the Censors for appointing me to the honourable post of Lumleian lecturer. But when one considers the long line of distinguished Fellows who, since the reign of Queen Elizabeth, have delivered these lectures, including the greatest of our Fellows, William Harvey, one may well feel diffident in occupying this place. And perhaps I feel the more diffident because I am simply your Registrar, a person whose chief ambition must now be to keep the annals of the College as accurately as my predecessor—if, indeed, that be possible. But I do not doubt, Sir, that in making this appointment you had a precedent in view—namely, that in 1833 and on several subsequent occasions a well-known Registrar of this College, Dr. Francis Hawkins, was Lumleian lecturer. And I may say, Sir, that I, too, have a precedent for the choice of my subject, not only in the interesting Bradshaw lecture on Hysteria, which you heard last autumn from Dr. T. R. Glynn,[1] but also in the fact that Dr. Thomas Mayo, one of your eminent predecessors in the Presidential chair, delivered in 1842 Lumleian lectures on Nervous Apoplexy, Palsy, and Hysteria. And further, looking to the modern doctrine that hysteria is a kind of mental disability, it is interesting to note that Dr. Mayo wrote a book entitled "Elements of the Pathology of the Human Mind." But I cannot find that he correlated the two subjects in any way.

HYSTERIA AND NEURASTHENIA.

Between those diseases which are the peculiar province of the alienist, sometimes called psychoses, and those nervous diseases which we call organic and consider to be due to some definite bodily change, there lies a large class of affections to which we apply the vague but convenient term "functional nervous diseases." Sometimes we call them "neuroses," and the people who are prone to them "neurotics." Now this large class falls into several groups. The distinction between these groups is difficult, because in dealing with them we are bereft of the sure support of morbid anatomy. Yet some of these distinctions can easily be made. First, at the organic end of the scale appear several well-known and very definite diseases, which can only be called "functional" in a very qualified and provisional sense, since it seems certain that they have some physical or chemical basis, though we do not yet know it. Such diseases are epilepsy, migraine, chorea, and others. But beyond these as we pass from the organic to the psychical there come two groups of very common nervous affections concerning the bodily nature of which we know so little, that a tendency has now arisen to neglect this aspect of them and to study them chiefly from the side of psychology. These two groups are hysteria and neurasthenia: the first recognised from the early days of medicine, the second modern in name, though I suppose not in reality. Most of us will agree, I think, that we have in them two distinct types of disease, though of course there may be cases in which they overlap. Indeed, tables are laid down in text-books of the clinical points of difference between them. I will here only mention two of these differences.

1. That in hysteria we expect to find, at some time in the course of the disease, outward and visible symptoms, such as fits, paralysis, anæsthesia, and the like, which are objective at least in this sense that they force themselves on the attention of the physician, whereas in neurasthenia the symptoms are subjective and cannot be verified by observation. 2. That the patients have a different mental outlook; to the neurasthenic his symptoms are always a source of distress and may be a burden to his whole life, whereas the disabilities of the hysterical patient (perhaps I should say the confirmed hysterical patient) tell far less upon her, and she may even bear her cross with complacency; in short, the reality of the disease appears in the one case greater to the observer, and in the other to the patient.

But we must admit that in order accurately to define either of these diseases we must have a theory as to the essential nature of it, seeing that there is no easy physical means of recognising them, like the bacillus in tubercle, or the hepatised lung in pneumonia. I shall endeavour, Sir, in my second and third lectures to lay before you some of the current theories about hysteria.

The Nature of Functional Nervous Disease.

Now the first difficulty in theorising about these diseases is to settle whether we are to look on them as mental or as bodily affections. I do not propose to discuss neurasthenia in these lectures, but perhaps I may be allowed to say a few words about it in illustration of this difficulty. Under this general term "neurasthenia" are included several groups of cases. There are the patients described by Beard—perhaps we may call them simple neurasthenics—who suffer indeed from subjective feelings of exhaustion and incapacity, but whose principal symptoms—pains, headaches, backaches, giddiness, palpitations—might well be, and generally are, ascribed to physical causes. Then there are the neuropaths described by Dejerine, whose physical functions appear to be deranged, for they are unable (it may be) to walk, or sleep, or swallow, or micturate properly, yet no organic disease can be found in them, and Dejerine traces their complaints back to mental and moral causes. Lastly, there are the psychasthenics of Janet, in whom the psychical element is obviously preponderant, who are tormented by obsessions, doubts, crises of mental agitation, phobias, or by inarticulate and inexpressible feelings of distress—so-called borderland cases, though they do not always cross the border so as to become insane. Are all these classes of neurasthenics suffering from the same disease? And if we say, as appears incontrovertible, that the psychasthenic is

[1] THE LANCET, Nov. 8th, 1913, p. 1303.

affected mentally, then what of the simple neurasthenic? Why cannot he face his day's work? Has he some physical affection—say, malnutrition or toxæmia (if you like these words) of his nerves and muscles, or is he, too, a psychoneurotic, who is suffering from a mental depression, and has forgotten the truth of the song of Autolycus—

> A merry heart goes all the way,
> Your sad heart tires in a mile-a?

Now while the clinical delimination of hysteria is more easy than that of neurasthenia, because it is a more definite type of disease, yet there is the same difficulty in discussing its nature. Is it a mental or a bodily disease? There are those who look on it as a problem in physiology, to be solved by knowledge of the anatomy, chemistry, and functions of the brain. There are those who would solve it by psychological methods. I think it is no contradiction to say that both are right. It is a question of difference in their points of view, their methods of work, and perhaps their predilections. As to the point of view, if I was to hold up to you, Sir, say half a crown, you might say it was heads, I from my side of the table should have to say it was tails. Not that I should be contradicting you, Sir, unless indeed I forgot that the two faces are indissolubly connected, just as there is some unknown but certain connexion between mind and matter. And as to the method, the physiologists and psychologists are like two gangs of workmen excavating opposite ends of a tunnel; they may hope to meet some day if they have a due regard to the direction of each other's work. But I am afraid the physiologists are apt to think that the psychologists' work is child's play, mere beating the air; whereas the psychologists retort that the physiologists have reached a stratum much too hard for them to work—namely, the task of exhibiting mental phenomena in terms of nerve cells and nerve fibres.

SYMPTOMS OF HYSTERIA.

Anyhow there exist these two ways of regarding functional nervous disease, and probably it will be a long time before they are satisfactorily combined. Now I propose, Sir, to defer for the present the consideration of systematic theories of hysteria, and in this lecture merely to review some of the symptoms of the disease in such a way as to show that it is not always easy to choose between the physiological and psychological explanations, or to adopt one to the exclusion of the other. And if in so doing I travel over familiar ground, I must plead in excuse that for the purpose in hand the common symptoms are perhaps more valuable than the less well known.

Hysterical Fits.

The hysterical fit or paroxysm has always been considered one of the most characteristic features of the disease. The points of diagnosis between the fits of hysteria and those of true epilepsy or of Jacksonian epilepsy are so well known that I need not repeat them. But, indeed, there are as great differences between the varieties of hysterical fits *inter se*. Consider the simple hysterical fit as described by Briquet, corresponding to the popular "fit of hysterics," in which the patient feels a lump in the throat or some other odd sensation, sinks into a chair, gives a mild emotional display of gesticulation, tears, or laughter, and speedily comes to again, having never lost consciousness of her surroundings or passed beyond the reach of help from her friends. How greatly does this differ from the hystero-epileptic fit as described by Charcot, in which the patient loses consciousness and unfolds a regular panorama of striking, one might almost say terrible, events, in the four stages of epilepsy, meaningless contortions, dramatic display, and delirium. One might well suppose that these two varieties of fit had nothing to do with each other. There is, however, a third variety, which stands between these two extremes, common enough in this country and elsewhere; to which Sir William Gowers gave the name of "hysteroid." In this type of fit there are loss of consciousness, though this may vary in degree in different cases, rigidity of the limbs, and very frequently opisthotonos, and movements of a purposive or coördinated character, in which, however, it may be impossible to trace any one dominant idea.

It is difficult to see what single explanation will fit these three kinds of attacks, not to mention the other forms, small and great, such as hysterical petit-mal, swoons, prolonged sleep, ecstasies, and so forth. For the simple kinds of fit some simple physical explanation, such as variation in the cerebral blood-supply, might perhaps suffice, and there is a fact, rather lost sight of nowadays, which seems distinctly of the physical order, I mean the copious secretion of watery urine which may take place after a fit, to which Gilles de la Tourette added a variation in the chemical composition of the urine. The psychological explanation, on the other hand, takes for its starting-point the dramatic stage of the hystero-epileptic fit. The patient appears to be transported to some scene of her past life; it absorbs her whole consciousness, and she acts it out regardless of her present surroundings. This can be demonstrated in cases where this phase of the fit is well developed. It is reasonably argued that the same mental process is going on in the other kinds of hysterical fit, where the patient, however, does not do the acting so well. This may be so with our own countrywomen, who are not, perhaps, histrionic by nature. But it is difficult to construe in this way the meaningless movements and rigidities which are so common, especially the frequently recurring opisthotonos. The particular (sexual) significance that has been ascribed to the opisthotonos does not apply to its extreme form the "arc de cercle" or to some of the varieties of this position.

It must be mentioned, however, that serious doubts are now thrown upon the genuineness of Charcot's hystero-epileptic fits. I believe that they are not now seen in Paris, and are considered by some Parisian authorities to have been a piece of display on the part of certain well-trained patients who knew what was expected of them, and did it. There may be truth in this, but I can scarcely think it is the whole truth, for the reason that in this country, and in patients who have been subjected to no sort of suggestion, one sometimes sees attacks to which the term hystero-epileptic might quite reasonably be applied. Take first the apparent combination of epilepsy and hysteria. I remember a woman among my out-patients at the National Hospital for the Paralysed and Epileptic who while sitting in front of me had an attack which (except for the absence of tongue-biting and of micturition) most closely resembled epilepsy, and when this ceased she passed into hysterical convulsions. It may be said, perhaps, that this was hysteria following a true epileptic attack, what Sir William Gowers called post-epileptic hysteria. But in the following

instance that order was reversed, the hysterical attack coming first.

A woman (Mrs. A), who had been several times in hospital, and who is no doubt a first-class hysteric, is subject *inter alia* to fits. These have been always diagnosed as hysterical, yet several observers have noticed that they look very like epilepsy. On Nov. 15th last I saw a fit of the following nature. I had just been hypnotising her, and had been pressing her rather strongly with the suggestion that she was to get rid of her symptoms. I mention this because she is rather apt to have a fit when she is too much bothered by examination or remedial suggestions. She had returned to her normal state, and was being helped into her walking jacket by her husband, when she closed her eyes, began to moan, and sank limply into his arms. He put her into a chair and then movements of the body began, I think of the nature of opisthotonos, which she often has. Thus far there was no suggestion of epilepsy; but then instead of coming round her eyes opened, rolled upwards and to the right, her face became congested, her right arm became rigid at first and then banged up and down on the side of the chair. This second stage of the attack was repeated about three times. Here, then, was a good representation of epilepsy, and indeed of unilateral epileptic convulsions, preceded by a distinct hysterical stage and, as I think, hysterical throughout.

On the strength of these and other cases I believe in the existence of hystero-epilepsy. I quite admit that I have never seen the complete and regular drama in four acts, which appears to have been the rule in the palmy days of "*la grande hystérie*" at the Salpêtrière—consisting of epilepsy, contortions or clownism, *attitudes passionnelles* or dramatic stage, and delirium, in regular sequence—but I suppose we have all seen selections from it; the common hysteroid fit represents in a mild way the clowning stage, and sometimes we witness the dramatic stage in which a past scene is re-enacted by the patient. Here is an instance.

A young sailor was sent into Queen-square Hospital with the following history. In the course of a gun drill an explosion had happened and a piece of flying metal had struck him on the head and rendered him unconscious. Ever since he had been subject to fits characterised (we were told) by unilateral convulsions. But in the hospital nothing happened until the day when he was about to leave. Then he had a fit, witnessed by the resident medical officer, in which he acted out the scene of the gun drill. He listened for the word of the commanding officer, made the proper reply, went through the manipulation of the gun, and, finally, presumably when the explosion happened, fell down on the floor.

Let us leave the subject of fits and consider some of the interparoxysmal symptoms, and in the first place those symptoms which are so common that Charcot considered them to be characteristic marks or "stigmata" of hysteria.

Anæsthesia.

The most important of them is anæsthesia, and the characters of hysterical anæsthesia are so important from the point of view of theory that I must dwell on them a short time, though doubtless they are familiar to you. Hysterical anæsthesia may be so marked and so well defined as inevitably to suggest a local lesion of the nervous system. What can be more natural than to suppose that a hemi-anæsthesia of the face, trunk, and limbs is due to an affection of the posterior part of the internal capsule on the opposite side? Yet in other cases where the anæsthesia is less widely spread it can be easily shown that it corresponds to no anatomical lesion. The anæsthesia which covers the area of a long glove or stocking might, it is true, be produced by a peripheral neuritis, but this explanation fails when the fingers or the feet are left out of this glove or stocking, as sometimes happens. Indeed, it is now generally admitted that hysterical anæsthesia corresponds, not to any real distribution of nerves, but to the patient's conception of her anatomy. And that the anæsthesia is conceptual (if I may use that term) can be shown in a really curious way. It can be demonstrated in some cases, where the anæsthesia appears to be absolute, that the patient really does feel after all. This fact—now known, I think, as Janet's sign—was first shown to me many years ago by Dr. R. H. Crowley, now a Member of our College, and at that time house physician to St. Bartholomew's Hospital. The demonstration was simple, you might say ludicrously simple. A girl, who had other puzzling nervous symptoms, exhibited certain areas of anæsthesia. When after closing her eyes you put a finger on one of these anæsthetic places several times, at the same time saying to her, "Say 'yes' when I touch you," she said nothing. But when you did the same thing and said to her "Say 'no' when I don't touch you," she regularly said "no" each time she was touched. Of course, shamming was suggested, but at best it must have been a very stupid sham; and I have seen this symptom in so many hysterical cases since that I feel sure it is genuine. Some patients, as might be expected, will see at once the absurdity of being asked to say "'no' when I don't touch you," and will tell you so. And even with those who reply readily enough at first, if the absurdity is brought home to them, as it may be by incautious laughter on the part of the bystanders, you will never get them to answer thus again. Still you may be able to apply the test in other ways—say as follows.

A woman was completely anæsthetic on the right half of the body and had only partial use of the right hand. I put my finger on the left part of her chest, where sensation was natural, and told her to touch with her right (semi-paralysed) hand the place that I had touched. She did so with some effort. Then after reminding her that she could use her left hand quite well, I touched the right (anæsthetic) side of her chest and told her to touch the spot with the left (non-paralysed) hand. She did so, thereby showing, of course, that she had felt the touch. I tried this a second time and she did not touch the spot, but nevertheless lifted up her hand to do so, again showing that she had felt the touch. I tried once more and this time she did nothing.

When the anæsthesia involves the muscles and deeper parts, as well as the skin, a very striking condition is produced, which is generally associated, I believe, with the name of Lasègue, though it is recorded also by Duchenne. The patient, Mrs. A, whose fit I described just now, has exhibited this condition for many years. Her left arm, and indeed all her left side, is entirely anæsthetic both as to the skin and as to the deeper parts. When she watches it she can use it moderately well; when she shuts her eyes she cannot move it at all, for she is unconscious of its

existence. She does not know where it is, and if you tell her to grasp it with her right hand she fumbles about to find it; and if while she is doing this you put your left hand into her right she thinks she has got hold of her own left hand. One sometimes hears of patients who after amputation of a limb retain a "phantom" of it; but here is a patient with a sound limb, who nevertheless when she shuts her eyes has not got "the ghost of a notion" of it. Nevertheless, this anæsthesia is not real, for she has been seen doing up her hair, with both her hands behind her head, where she could not watch them.

It is certainly very difficult to explain this contradictory character of hysterical anæsthesia. I do not think it has ever been described in anæsthesia dependent on organic disease. I do not know of any region of the brain, to deficient functioning of which it can be ascribed. All that one can say so far is that the patient is in a peculiar mental condition in which she feels, but does not feel that she feels. But then, again, before we explain it in a purely psychological way, there is another fact that must give us pause—namely, that in many such cases the anæsthetic parts do not bleed when they are pricked. This seems to bring us back to the brutal world of flesh and blood.

Retraction of Field of Vision.

About the second "stigma" of hysteria, concentric retraction of the field of vision, similar remarks may be made. It does not inconvenience those who are affected by it. Janet noticed patients, whose visual fields were much restricted, playing at ball in the court of the Salpêtrière without any inconvenient turning of the head to watch the ball. He also quotes the case of a boy who, having been frightened by a conflagration, had fits whenever he saw a flame. His visual field was reduced to 5°, and beyond this limit he seemed to see nothing, But when a lighted match was introduced into this blind part of the field a fit followed. Again, when a hysterical patient has quite lost the sight of one eye, it is possible by means of prisms and other apparatus known to ophthalmologists to show that the blind eye still sees.

Hysterogenic Zones.

The third "stigma" is the hysterogenic zone. This term expresses the fact that pressure upon certain parts of the body will produce, or it may be stop, a hysterical fit. I think that with regard to these "zones" we in this country are in the same position as we are with regard to hystero-epileptic fits. We do not commonly see them in a complete form. Sometimes, however, we do, and often we see them in a modified or ill-developed form. Dr. Glynn mentioned in his Bradshaw lecture the case of a boy under Mr. Luther Holden, who fell down in convulsions whenever a place on his skull was touched. I remember an out-patient at Queen-square Hospital in whom, without the least expecting it, I produced a hysterical fit by "ovarian" pressure. I ought to say inguinal pressure, because the patient was a man. I also remember a young woman with a persistent hysterical cough. Sudden pressure under the left breast produced a wince, a gasp, and a cessation of the cough. I found this out quite unexpectedly whilst looking for tender points. Now as to such tender points, I suppose everyone knows that they are very common in hysterical patients, and that they may be found without any suggestion in patients examined for the first time. They are commonest where the hysterogenic zones are commonest—i.e., in the inguinal region (so-called ovarian region), the inframammary region, the spine and to each side of it. Sometimes they are more than tender, and the patient will say that the pressure causes an oppression at the chest, a lump in the throat, or makes her "feel queer." I therefore regard these tender points as the basis upon which is developed the full-fledged hysterogenic zone.

According to psychological theories the hysterogenic zone is a subsidiary agent. That which really produces the fit is the emergence of the particular memory or idea with which the fit is invariably connected. Touching the "zone" is only a sort of signal for the explosion of the mine. This seems a reasonable explanation in some cases —for instance, where a fit can be produced by touching the site of an old injury. It is not so readily applied to the commoner cases. These tender points have a fairly regular distribution over the body. The ideas, on the other hand, upon which the fits depend must be very various in different cases. Why should touching the same stop produce such different tunes?

So much, then, for the stigmata of Charcot. It is somewhat pathetic to think that in the very land that gave them birth they have fallen from their high repute. One eminent French physician maintains, as we shall see, that the real stigmata of hysteria are mental, not bodily; another, that these bodily stigmata are due to sheer suggestion. They may, no doubt, have been over-estimated by physicians and over-elaborated perhaps by certain patients. But they exist, in a rudimentary form perhaps, in patients who never heard of their importance, so they are not, in my opinion, mere passing fashions, like ladies' ruffs or crinolines. Even at that estimate they deserve some attention as "milestones" in the history of the disease.

Contracture of Muscles.

Hysterical contracture of muscles is a very common symptom and important for our purpose, because it may be regarded from either point of view, the physical or the mental. At first sight it appears a purely physical phenomenon, and quite comparable to the contracture which occurs in connexion with disease of the pyramidal tracts. As in a transverse myelitis, so in hysteria we may witness rigidity of the lower limbs, with extension of the feet and legs and internal rotation of the thighs, so that to tell whether the case is hysterical or not we may have to appeal to other factors than the contracture itself; and even then the condition of the plantar reflex may be the only point to decide the diagnosis absolutely. It is, of course, universally held that the presence of an extensor plantar reflex indicates organic disease. And to this I should agree with one proviso—viz., that the extensor reflex should be permanent. For we know that such a reflex may occur temporarily after an epileptic fit. And I have seen it under the following circumstances:—

A boy was admitted into St. Bartholomew's Hospital. When I saw him (which was once only, on the day before his death) he had vomiting, progressive coma, and extensor plantar reflexes on both sides. I thought he had a cerebral tumour, but the post-mortem examination showed that he died from Addison's disease. Nothing abnormal was found either in the brain or the spinal cord, and a careful microscopical examination of the

cord made by Dr. Farquhar Buzzard showed that it was perfectly normal.

But my point, from which I have digressed, was the close resemblance between hysterical contracture of the lower limbs and that resulting from disease of the pyramidal tracts—so close, indeed, that it has been suggested that a malnutrition of the pyramidal tracts is actually the cause of such hysterical contracture.

Nevertheless, if we consider the way in which some hysterical contractures originate, we shall be tempted to believe that in certain cases they are dependent upon mental influences. Such an origin has been suggested even for the ordinary cases of paraplegic rigidity which I have just mentioned. Most of us have seen cases where, for the relief of pain or other reasons, a splint has been put on the forearm, and after its removal the muscles have remained rigid. That this is not a mere local affection, caused by the mechanical restraint, is shown by the fact that the rigidity may spread beyond the muscles originally confined by the splint, perhaps to the whole limb. Immobility seems to have become a fixed idea. Perhaps the rarer cases of contracture of the muscles of the trunk may seem more convincing, because in them the possible influence of pyramidal tract disease can be eliminated. The examples which I will now give are from Professor Janet's book on "Neuroses and Fixed Ideas"; they illustrate his view that muscular contractures may depend upon a mental state.

1. (Vol. I., p. 304, Obs. 8.) A girl who was living in a state of much depression since the death of her only relative became the subject of a criminal assault. Her assailant, however, only succeeded in placing his hand on the right side of her abdomen. She subsequently became subject to hysterical attacks and other symptoms. On admission to the Salpêtrière the right side of the abdomen was intensely tender to touch and the abdominal muscles were rigid, particularly on the right side.

2. (Vol. II., pp. 423–428, Obs. 126.) A man had, amongst other symptoms, hysterical hemiplegia with hemianæsthesia. While this was half cured he went back to work and tried carrying parcels on his shoulders. This gave rise first to pain at the back of the neck, then to contracture of the muscles there, so that his head was constantly drawn backward, and he could not bend forward. Curiously enough, when this contracture developed the hemiplegia got well. One day he again attempted to carry a parcel, and was very much upset because he let it fall. But the result was that the contracture suddenly disappeared.

This sudden and apparently unaccountable recovery from hysterical symptoms is remarkable, though not uncommon. It is a fact that should be remembered by those who have theories as to the results of treatment.

3. (Vol. I., p. 294, Obs. 1.) Contractures of the abdominal muscles, lumbar muscles, and thigh muscles of the left side, followed by contracture of some of the neck muscles, fixing the patient in a peculiarly awkward position, resulted from the following circumstances. A girl stumbled over the body of a drunken man and ran away in a great fright. A month later hysterical fits developed, in which she had the hallucination of a man pursuing her, and tried to escape, at the same time turning her head to watch him. After each fit she assumed the following attitude—spine arched to left, body bent forward, abdomen folded on left side, head turned to left. This position gradually became permanent, owing to continuous contracture of the muscles concerned.

4. (Vol. II., pp. 428, foll., Obs. 129.) The position of another patient was as follows: Slight flexion of the trunk to the left, owing to contracture of the left abdominal muscles—viz., rectus and obliques; slight flexion of the left thigh with adduction and inversion of the limb, which was fixed in this position by rigidity of the thigh muscles, though she could move the foot and knee. This rigidity had been preceded by clonic spasms of the muscles concerned. The actual outbreak of the hysteria was recent, and was due apparently to the loss of a sister and other troubles, but the peculiar form of it—that is, the position determined by the muscular contractures—was ascertained to correspond with the position which the patient had been in the habit of assuming years previously, under emotional circumstances of a certain kind. Later on the muscles on the left side of the abdomen, which had been rigid, became paralysed, and she fell over to the right side, almost reversing the previous position.

This last case reminds me of a girl who was under my care in St. Bartholomew's Hospital some two years ago, who could not walk without persistently bending her trunk to the left. The left lower limb was also affected, but almost in the reverse fashion to the French case which I have just quoted, for the thigh was rotated outwards and the foot dragged behind her, at the same time pointed outwards. In this way she limped along, all hunched over to the left side. It appears that she had had pains in her back, and on getting medical advice about them had been told that she had curvature of the spine. After this the peculiar attitude gradually developed. I think the idea of spinal disease must have taken great hold of her, for even in hypnosis (and she was a particularly good subject) I had much difficulty in getting her to admit that she had no such disease. The inclination of the trunk was a passable representation of lateral curvature, but I could not account for the peculiar position of the left lower limb. She eventually recovered, got married, and the last time I saw her was going out to her husband's farm in Canada.

Peculiar Features about Hysterical Contractures.

Now although it would seem that some hysterical contractures may be dependent upon a persistent or recurrent mental state or "idea," yet I doubt whether they can all be explained in this way. At any rate, contracture seems to be a symptom which would well repay careful investigation.

There are two peculiar features about hysterical contractures which I might mention here, without discussing them at length.

First, that such contractures, or, at any rate, some of them, persist during sleep. It is not always easy to observe this for oneself. There was a woman in Queen-square Hospital last year whose hand was fixed in the "obstetric position." Dr. Adie, house physician, kindly observed her at my request during her sleep, and found the position the same. Mrs. A, the patient whose fits and anæsthesia I have already described, came to me last year with her right middle finger firmly flexed into the palm. Her husband assured me that the contracture remained during her sleep. So it did during hypnotic sleep, though in this condition the finger could be easily coaxed to open. The persistence of a hysterical contracture during natural sleep is not, perhaps, what we should expect, yet it has long been known. F. C. Skey, the well-known surgeon of St. Bartholomew's Hospital, notices the fact in his lectures delivered in 1866. After commenting on the fact that chloroform anæsthesia will remove hysterical contractions of the fingers or elbow he says: "To bring this morbid state of the muscle within the influence of the mind as its cause is almost of necessity to infer the local evil to

be wilful; but if it were so, the state of unconsciousness during sleep would remove it, which it does not, for the contraction is constant by night and by day."

The second point is that, when such contractures are forcibly overcome, the patient seems to suffer intense pain. The reason is not obvious. Is it due to some purely local condition of the muscles? Or is it the expression of some more general law? For some authors have noticed that pain in the head occurs when functions which hysterical patients have lost, such as memory, sensibility, or motility, are being restored in the course of treatment. Now, since permanent hysterical symptoms, such as paralysis, anæsthesia, contractures, and the like, are often ushered in by pain, it may be that in the reverse stage, from symptom to cure, pain is a stage through which the patient must pass.

Of course, in these remarks about pain and the persistence of contractures during sleep I exclude cases in which adhesions have formed about the joints—a complication which, according to Weir Mitchell, readily occurs in hysterical cases.

Vaso-motor and Nutritional Symptoms.

All the symptoms that I have mentioned as yet are common and well-known symptoms. I have dwelt on them chiefly to show that they may reasonably be interpreted from the psychological point of view. This, indeed, is the kind of interpretation which most modern theories on hysteria employ. But it will have occurred to you, no doubt, that there is another class of symptoms which are by no means easy to interpret in this way; I mean the rarer class known as vaso-motor and nutritional symptoms. Examples of this class are—fever, muscular atrophy, certain skin affections, œdema, congestions, not to mention obscure affections of secretion and excretion, as of sweat, milk, and urine. The existence of many of these has been denied, and others have been relegated to the limbo of malingering—perhaps correctly, but I doubt whether we can get rid of all of them in this way.

Affections of the Skin.

Skin affections have been described, mostly vesicular or bullous in appearance, ending in superficial ulceration; and the eagle eye of the dermatologist will pick you out lesions worthy to be dignified with the name "dermatitis neurotrophica"; but generally there hangs over these a cloud of grave suspicion that there has been some self-inflicted injury. This difficulty arose in the case of a woman who was for a long time under my care in St. Bartholomew's and Queen-square Hospitals. A very marked hysteria was in her case combined with disseminated sclerosis (the latter verified post mortem). The right loin, right side of abdomen, and right lower limb, all of which parts were anæsthetic in a hysterical sense, were covered with oval scars, the sequelæ of superficial ulceration, which were edged round with dark pigment, so as to form quite a striking picture.[2] This pigmentation I believe to have been due to arsenic, which had been freely administered before I saw her. She developed very few lesions while in my wards, so that I cannot speak with certainty as to the method of their production.

This question of self-infliction of injuries in relation to hysteria is an extremely interesting one, but can hardly be discussed in the time at my disposal.

[2] See Brain, October, 1907.

Muscular Wasting.

Muscular wasting may be seen in hysteria, affecting (it may be) a single limb or segment of a limb, but not picking out individual muscles nor exhibiting electrical reaction of degeneration. It resembles, therefore, the muscular atrophy sometimes seen in hemiplegia rather than that of progressive muscular atrophy.

Ecchymoses.

Ecchymoses into the skin may occur, though they are uncommon. A lady, who had had a hysterical fit the night before I saw her, showed me two dark patches on her leg, and said she often "came out in bruises" after the attacks, though she was not violent in them so as to injure herself; and that once she had had a spontaneous black eye. Perhaps I may mention that I once described several cases of paroxysmal ecchymosis or œdema of the eyelids coming on without obvious cause, and that one of these cases was a hysterical girl. Another lady, whom I took to be an example of severe hysteria, told me that she had had an attack of extreme pain in the left arm, and that with this the limb had swollen and turned black, but this I did not see for myself.

Gilles de la Tourette[3] observed the following case. A girl, aged 19, had some mental upset one evening, upon which followed a storm of weeping, bad dreams all through the night, and towards morning pain on the inner side of the right leg. Next day at this spot there were an oval patch of ecchymosis (5 cm. × 3 cm.) and right hemianæsthesia most marked in the painful leg. She was confident that the mark had not been there before and that it was not the result of a blow.

I need hardly remind you that the stigmata of mediæval saints which sometimes appeared during trance or ecstasy have been interpreted, rightly or wrongly, as hysterical hæmorrhages; and the same interpretation might be given to the story of the woman who averred that certain black bruises on her thighs were caused by Satan lashing her with his iron tail, because she resisted his temptations, or to that of Alizon Device, one of the Lancashire witches, who said that a blue mark under her left breast was caused by the devil in the form of a black dog sucking there.

Œdema.

Hysterical œdema was described by Sydenham. He says:[4]—

> Just as this disease attacks all the internal parts, so also does it sometimes take possession of the external ones—namely, the muscular flesh of the jaws, shoulders, hands, legs, and ankles; sometimes causing pain, sometimes swelling. Of such swellings, that of the ankles is most remarkable, differing in two ways from that of dropsy. Dropsical swellings are, in the first place, greatest towards the evening; in the second, they retain the mark of the finger just like wet paste. In hysteria there is no such impression, and the puffiness is greatest in the morning. Generally also it is one ankle that swells. In respect, however, to size and shape, hysterical and dropsical swellings are so much alike that the patient can rarely be undeceived as to their nature.

Sydenham does not mention any change of colour in the skin, but Charcot and his school[5] described a "blue œdema" in which the surface shows a dusky congestion or cyanosis, and it would seem, according to the statements of other authors, that

[3] Nouvelle Iconographie de la Salpêtrière, vol. iii.
[4] Epistolary Dissertation to Dr. Cole, Section 29.
[5] Gilles de la Tourette, Nouvelle Iconographie de la Salpêtrière, vol. ii., p. 265.

exceptionally the skin may even be red and hot, and that incisions have actually been made into such swellings.

Hysterical œdema generally occurs in association with some other lesion, such as a contracture, a paralysis, or a painful joint. Generally it persists for some time, but sometimes it appears and disappears rapidly. The diagnosis of such paroxysmal hysterical œdema from the œdema described by Quincke (so-called angioneurotic œdema) has been discussed by Dr. F. H. Edgeworth in the *Quarterly Journal of Medicine* (Vol. II.).

The Hysterical Breast.

The hysterical breast, which in its fully developed form must be a very striking symptom, appears to be a combination of pain, œdema, and congestion, localised in this particular organ. The first reference to it was made, I believe, in 1667 by that distinguished Fellow of our College, Thomas Willis.[6] He describes the pain, tenderness, and swelling of the breast, and the associated hysterical convulsions. Later, an equally distinguished surgeon, Sir Benjamin Brodie, says in his remarks upon local hysterical affections:—

> Young women are subject to an affection of the breast corresponding to the hysterical affections of the joints, and indicated by very similar symptoms. These cases have been noticed by Sir Astley Cooper in his observations on disease of the breast. The patient complains of pain in the breast, and shrinks on pressure being made with the fingers or even on the skin being slightly pinched. Not infrequently the examination of the part produces twitches and motions of the body; yet if it can be dexterously managed while the examination is being made that the patient's attention should be otherwise engaged, not only these motions do not occur, but she may seem scarcely sensible of pain. The morbid sensibility is not confined to the breast, but extends to the axilla and down the arm. No distinct tumour is perceptible in the breast, but when the disease has been of long continuance the whole organ becomes slightly enlarged, probably in consequence of an increased determination of blood to the small vessels; yet there is no redness of the skin, and indeed the skin is even paler than natural, with a somewhat glossy appearance of its surface.

Pain and tenderness were therefore the leading feature in the cases seen by Brodie; and further, from what he says concerning the twitchings and movements produced by handling the breast, we may suspect that it was not only tender, but might have formed a hysterogenic zone. But certain other physical phenomena, missing in his description, are much in evidence in the description of Gilles de la Tourette[7] and other French authors. The nipple becomes erect, the breast swells, it may be to twice its natural size or more; the skin, which in some cases retains its normal colour, in others becomes bluish-red or bright red, and this congestion has been said actually to go on to gangrene of the skin. Féré has witnessed such swelling and redness develop in a very short space of time, apparently for no other reason than that the patient's attendant had said something that offended her. These phenomena are for the most part paroxysmal, but the pain and swelling may persist in the intervals of the attacks.

Causation of Physical Symptoms.

If I have spent your time, Sir, in speaking about these particular forms of hysteria, it is because they seem to have a particular theoretical interest. They do not fit very easily into the psychical interpretation of hysteria. We can readily understand that hysterical convulsions may be produced by the overwhelming power of some terrible memory; that pain and loss of sensation (which, after all, are but modifications of consciousness) may be produced by affections of the mind; that paralysis, or prolonged contractions, of voluntary muscles might be due to some perversion of volition. Moreover, all these things may be artificially produced by skilful hypnotism. But it is difficult to see how such outward and visible signs as œdema, congestion, or ecchymosis can be produced by purely mental agencies.

This much, however, may be said: First, that we hardly know as yet how much emotion may do towards modifying our bodily states. And emotion is certainly an important factor in hysteria. Secondly, that these same physical symptoms which I have been discussing sometimes appear and disappear in a way which seems to suggest that they depend upon the patient's state of mind. I will conclude this lecture with two cases which point this way; they shall be very briefly put.

1.[8] A girl, under the care of Professor Janet, had œdema of the wrist and dorsum of the hand. She had also anæsthesia of that side affecting both the skin and the deeper parts, so that (like the case I previously mentioned) she could only move the parts while she was looking at them. The œdema could be dispersed in the following way. While her attention was diverted to some other subject a whispered command was given to her to move her fingers. This she did unconsciously. She was then told to look at her hand, and she said in surprise, "Why, my fingers are moving. I suppose the swelling will go next." And so it did within an hour. The removal of the one symptom through some curious mental connexion effected the removal of the other.

2.[9] A case is given by Dr. Charon and Dr. Courbet relating to the mode of production of a hysterical breast. In an institution for children at Amiens was a girl, aged 13½, who was subject to hysterical convulsions and attacks of sleep. She had menstruated twice; her breasts were highly developed for her age. It so happened that the sister of the ward had an abscess of the right breast which had to be opened. Secondary hæmorrhage occurred after the operation, and caused great alarm in the establishment. The girl was particularly upset, for her own mother had died a year and a half previously from cancer of the breast, which had twice been operated upon. She lay awake for a long time in the night and in the morning felt a sharp pain in the right breast, and found it to be red and swollen. She said nothing, hoping it would pass off, but the following day, when she was having a douche, the affection was discovered. The right breast was swollen, immobile, of a uniform bluish-red colour, hot to touch, tender, but not otherwise very painful. She asked the doctor whether it was serious; he reassured her and the breast soon got well.

The authors of this paper are confident that any sort of trickery could be excluded, and they consider that it was a case of "vaso-motor affection," due to "auto-suggestion."

[6] De Morbis Convulsivis, Ch. vi., Obs. 1.
[7] Nouvelle Iconographie de la Salpêtrière, vol. viii., p. 107.
[8] Névroses et Idées Fixes, vol. ii., p. 511.
[9] Nouvelle Iconographie de la Salpêtrière, 1913, March–April.

MEDICAL MAGISTRATE.—Dr. James Cardwell Gardner, of Amersham, has been appointed by the Lord Chancellor to the commission of the peace for the county of Bucks.

CHELSEA HOSPITAL FOR WOMEN.—The rebuilding fund of this institution is to benefit on May 5th and 6th by a sale of work, which will take place at 35, Chesham-place, S.W., by permission of the Baroness de Goldsmid. The sale will be opened on the first day by the Marchioness of Londonderry, and on the second by the Countess of Ilchester, President of the Ladies' Committee, who is also taking a stall.

INTESTINAL TOXÆMIA.

WITH SPECIAL REFERENCE TO THE INDICATIONS FOR OPERATIVE TREATMENT.[1]

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(*With Illustrative Plate.*)

IN his instructive opening of the discussion on intestinal toxæmia, published in the Transactions of the Edinburgh Medico-Chirurgical Society for 1913, Professor William Russell dealt at considerable length with the scientific side of the subject, time not permitting him to consider in any detail its practical aspects.[2] He dismissed the clinical aspects of the subject by stating that "there is no doubt amongst us at all as to the general proposition that the retention of alimentary excreta is deleterious and injurious to the vast majority of people." "You have," he went on to say, "isolated cases where apparently this retention of alimentary excreta has no apparent injurious effect." It is interesting to compare this statement with the definition of intestinal stasis given by Sir Arbuthnot Lane in his introduction to the discussion on alimentary toxæmia at the special meeting of Fellows of the Royal Society of Medicine in 1913.[3] Lane defines the condition as an abnormal delay in the transmission of intestinal contents through some portion or portions of the gastro-intestinal tract, resulting in the absorption into the system of a greater quantity of toxic material than the organism is able to deal with effectively by means of the organs whose function it is to eliminate it. The toxins circulate through the tissues and produce definite degenerative changes in them. Finally, the organs whose functions it is to convey, convert, and eliminate the several toxic products circulating in the blood, themselves undergo degeneration, under the influence of prolonged and progressive strain. Then the degenerative changes in the tissues progress more rapidly in proportion to the failure of the organs of elimination. It is probable that most clinicians will agree with the general propositions stated by Professor Russell, but on the all-important points of detail there may be a good deal of difference of opinion. There may be some who attach as much importance to intestinal toxæmia as I do, others who think my views fanciful and exaggerated, and yet others whose ideas on the subject are less determined, and accordingly it may be instructive if we come into closer grips with the subject in its practical aspects. In the following paper I will deal more particularly with cases of intestinal toxæmia which have proved intractable to medical treatment, and discuss the question of appropriate operative treatment.

At this date it is hardly necessary to elaborate the importance of the subject. We all know that in the past few years there have been a very large number of abdominal operations performed for chronic disease, more especially the removal of the appendix, and to a lesser extent operations on the stomach, in which the results of the operation have proved disappointing to the patient. It is too commonly assumed that the responsibility for this erroneous treatment is entirely surgical; in fairness, the responsibility has to be shared by the physician and surgeon alike. In fact, I would rather say in connexion with the class of case that I am considering that the physician is more to blame than the surgeon, as too often the surgeon is called in in these chronic cases to diagnose the condition, whereas it is really the duty of the physician to exhaust the possibilities of modern methods of investigation, and to form a provisional opinion as to the nature of the condition, and the best method of treatment by medical or by surgical means.

1. *The Pathological Basis for Intestinal Toxæmia.*

Stated shortly, this consists in the following, in various combinations:—

(a) The presence of constipation.—The existence of this is determined to some extent by the history of the patient, and also by the use of the enema and the X rays. The X rays have special value in so far as they are the only means at our disposal for locating the part of the bowel primarily affected. In this connexion it is important to bear in mind the comparative frequency with which we meet in practice cases of severe constipation in patients whose bowels move—though very imperfectly—every day.

(b) An associated catarrh of the large bowel, and in aggravated cases the lower end of the small intestine.—The existence of this is shown by excessive putrefaction in the stools with frequently marked excess of mucus, and it may be, attacks of diarrhœa, alternating with constipation. The urine is also frequently abnormal, containing catarrhal cells, white or red blood corpuscles, oxalate of lime crystals and bacteria, this condition of the urine being directly associated with and dependent upon the diseased state of the bowel.

(c) Dilatation of the bowel, more especially the cæcum and colon, often associated with visceroptosis.—These conditions are revealed by the presence of splashing on manual examination, more especially of the epigastric and cæcal regions, and by the results of X ray examination. In cases associated with marked ptosis the contour of the abdomen in the erect posture is distinctive, being flat in its upper half and prominent and bulging in its lower part. It is probable that in some of these cases a congenital weakness of the abdominal musculature is an important factor, this weakness being aggravated by defective posture and by pressure from tightly fitting corsets. In cases associated with marked ptosis the stasis is aggravated by the ptosis and conversely.

(d) The presence of adhesions, membranes, pathological kinks, &c., mechanically interfering with normal intestinal movement, with resulting stasis in the large and small bowel.—These conditions are suggested or revealed by the presence of isolated areas of tenderness on pressure, often erroneously attributed to the appendix, and by X ray examination.

2. *The Clinical Association of Normal Intestinal Functions.*

The chief indication of this is absence of any symptoms of ill-health, digestion being performed in the painless, unconscious manner characteristic of good health, and, objectively, the following.

A. *Normal stools.*—A normal stool consists largely of bacteria; it is acid, neutral, or faintly alkaline in reaction, and is free of offensive odour. Under the influence of an aperient a healthy stool

[1] A paper read before the Edinburgh Medico-Chirurgical Society on Jan. 21st, 1914.

[2] THE LANCET, July 19th, 1913, p. 146.

[3] THE LANCET, March 15th, 1913, p. 756.

acquires a more distinctly fæcal odour; in cases of intestinal toxæmia the stools may be markedly alkaline in reaction, and they are exceedingly offensive, often containing marked excess of mucus, the condition indicating abnormal putrefaction in the large bowel. When a healthy bowel is cleared out by an enema and subsequently irrigated with plain water, the returned fluid should be practically clear; in cases of severe intestinal toxæmia a very different result is obtained, the returned fluid being fæcal and foul-smelling and containing great excess of bacteria. The correction of this state of the stools is usually accompanied by the disappearance of the symptoms.

B. *The elimination of a normal urine.*—In this connexion attention should be particularly directed to the following points, the significance of which is, I think, not sufficiently appreciated, the different conditions referred to occurring in various combinations.

(*a*) A deficiency in the total amount of urine passed. An extreme example of this may be cited in the case of a stout lady affected with chronic rheumatism who was under my care some years ago, the total amount of urine voided in three days being just under 20 oz.

(*b*) The presence of cellular elements in the urine in marked excess of the normal. The examination of a centrifuge deposit of a normal urine obtained fresh may show the presence of two or three epithelial cells, and very occasionally a white blood corpuscle. In the cases under consideration the deposit in the centrifuge tube may be considerable, consisting of epithelial cells, white blood corpuscles, and a few red cells.

(*c*) The presence of numerous oxalate of lime crystals is a feature in not a few cases.

(*d*) The presence of bacteria in the urine; these bacteria being either voided in the urine or multiplying at an abnormal rate when voided, the latter condition indicating an unduly toxic condition of the urinary excretion.

I lay comparatively little stress on the presence or absence of indican, the one test on which reliance is laid in text-books.

The examination of the urine from these points of view requires, I think, much more attention than is commonly given to it.

In connexion with the bacteriological examination of the urine in men I never feel justified in passing the catheter, as this, in my opinion, is an unnecessary proceeding and not without danger. I rely on obtaining a sample of urine taken direct into a sterile tube from the middle of the stream with all due antiseptic precautions.

3. *X Rays. The Presence of Abnormal Intestinal Stasis.*

In recent years considerable light has been thrown on many gastro-intestinal disorders by the application of the X rays after a bismuth meal. Since Cannon first investigated the normal intestinal movement in animals by bismuth meals a vast amount of work has been carried out on intestinal movements in human subjects, notably by Hertz and others, and there is now an extensive literature on the subject. A great deal of very valuable information has been obtained, which is of value to the physician and surgeon alike in the diagnosis of various gastro-intestinal disorders, and it may safely be said that our knowledge of the great value of X rays in the diagnosis of abdominal conditions is still in its infancy. At the present time there are difficulties in regard to the completeness of the information gained by their use. These arise in the interpretation of the results, and are due largely to the absence of any standard method in connexion with the routine X ray examination. A further difficulty is the absence of sufficient data as to the range of normal limits in people who may be perfectly healthy. It would be a great advantage if radiographers adopted a standard bismuth meal and if the routine examination were made at uniformly recognised periods, as by this means we should be better able to compare the results of different observers.

We will first refer briefly to certain elementary facts which are generally accepted as established in connexion with the passage of bismuth meals.

Hertz, with a view to determining the rate of movement in the small and large bowel, examined 18 normal subjects after a bismuth meal at different intervals, in two cases every hour, in the majority of cases four times a day, and once or oftener on the day following. He found that the shadow appeared in the cæcum most frequently four hours after the meal, the hepatic flexure was reached from four to eight hours, the splenic flexure at 7 to 14 hours, and the junction of the descending colon with the iliac colon from 8 to 16 hours. In the pelvic colon the rate of progress was more slow. These figures represent an average.

It may be useful to follow the course of a bismuth meal as observed with the screen and radiograms. All my cases have been examined privately by Dr. W. Hope Fowler, the patients being screened immediately after the taking of the meal, and on four, five, or six occasions subsequently, at intervals ranging from 3 to 72 hours. Screen examinations were made in every instance by Dr. Fowler and myself, a very large number of photographs being taken at the same time. The meal consisted in an emulsion of 10 oz., containing 60 grm. of oxychloride of bismuth, followed by 30 grm. of the same preparation, with 4 grm. of lactose, given with 6 oz. of water. Examinations were made chiefly in the vertical position. The *shape* and the *position* of the stomach are first determined; normally the stomach hangs vertically to the left side of the middle line, and is shaped like the letter J, the lower end of it reaching from a little above to a little below the umbilicus. The *tone* of the stomach is then observed; this is revealed by the manner in which the organ grips its contents and by the rate and degree of *peristalsis*, which must be carefully observed. Immediately after food enters the stomach the organ at once commences to discharge its contents into the duodenum. The food passes into the first part of the duodenum, forming a characteristic duodenal cap, which is usually, but not invariably, revealed. After its passage into the second part of the duodenum the food may be seen passing quickly through the small intestine, but its rate of movement is usually such as to preclude a photograph being taken. In favourable cases a delicate stippling of a photographic plate may be seen, indicating the bismuth contents in the small intestine. The food is next visible in bulk when it reaches the terminal coils of the ileum and cæcum, the latter being reached in from four to six hours after the meal is taken. At the end of the sixth hour practically the whole of the food should be in the cæcum. On the following morning the bismuth contents are largely expelled, a screen examination may reveal a shadow in the rectum, pelvic colon, or iliac colon, these

representing the remaining part of the bismuth meal. Our knowledge of the mechanism of the movement of the large intestine is still incomplete. The evidence available justifies the view that intestinal movements of the large bowel take place four or five times daily, as the result of which the more solid contents in the large bowel are propelled onwards over a large area.

It may safely be assumed that in cases in which the bismuth meal is not completely voided within 48 hours a pathological stasis is present, the degree and situation of this stasis being determined by the situation and amount of the bismuth contents present. Thus the presence of a residue in the rectum and pelvic colon at this time may indicate a defect in the power of the rectum to expel its contents, but this is naturally a much less severe stasis than would be indicated by the presence of the whole meal or the major part of it in the cæcum and ascending colon at the same period.

The three most common sites of stasis are the lowest part of the ileum, the cæcum and ascending colon, and the rectum. At the present time a good deal of difference of opinion exists as to the degree of ileal stasis that is met with, and as to the existence of an associated and dependent duodenal stasis. Dr. A. C. Jordan, who has directed special attention to these points, attaches great importance to ileal stasis as a common pathological condition, and claims that it is associated with marked slowing of movement in the duodenum due to the dragging of the membranous attachments at the duodeno-jejunal junction. His views are based on a large series of cases radiographed by himself and subsequently observed at operations performed by Sir Arbuthnot Lane.

Hertz, on the other hand, regards ileal stasis as largely a physiological condition, and he has further been unable to confirm Jordan's X ray findings of a dilated duodenum. A very crucial point is here involved, and it is highly important that it should be determined which view is the correct one. For my own part, while originally sharing the views advocated by Hertz, I have lately seen reason to change, and am satisfied from a more adequate first-hand knowledge of the technique adopted by Jordan that his teaching on these important points is substantially correct. I have recently seen four cases in which this duodenal stasis was present in marked degree, the X ray diagnosis being amply confirmed in one instance at which operation has been performed. The appearance of the duodenum and jejunum in one of the four cases is well shown in Fig. 1. The appearances in the figure lead me to make the suggestion that cases of diabetes should be specially investigated by means of X rays in order to determine whether this condition of the duodenum is a common one, and whether it has special significance in regard to the etiology and treatment of the disease.

4. *Clinical Conditions Induced by Intestinal Toxæmia.*[4]

Long-continued observation of many cases of chronic disease, and more especially private cases, which I have had the opportunity of investigating by the aid of modern methods of diagnosis has led me to recognise three distinct groups of conditions that arise mainly or entirely from intestinal toxæmia. These are (1) a neurasthenic group (this includes some cases at present regarded as neurotic, and also a subgroup in which the symptoms are mainly mental); (2) rheumatoid arthritis; and (3) a "dyspeptic" group. The division between these groups is somewhat arbitrary, but their separate consideration is justified on practical grounds. A few words may be said by way of elaborating these points.

1. *Neurasthenia.*—Constipation and other gastric symptoms met with in neurasthenia are, according to some writers, a result and not a cause of the neurasthenic condition. A different view is now held by many clinicians. This is well brought out in the course of a discussion on the application of surgery for the relief of neurasthenic conditions published in the Transactions of the American Surgical Association for 1910. In introducing the discussion, Blake writes as follows: "While the neurologist is apt to consider the lowered blood pressure, the disturbance of intestinal functions, the concomitant putrefaction, gas formation, and auto-intoxication as symptoms of neurasthenia there can be no doubt but that they are in a large measure causative." I fully share the view so well expressed by Blake. In the course of the last few years I have had under my care many patients the subjects of neurasthenia, some of whom have suffered from the condition for years, in which the critical analysis of the symptoms and the careful examination of the stools, the urine, and of the digestive tract by means of the X rays pointed clearly to an unhealthy state of the prima via as the primary causative factor of the disease. The patients referred to made a complete and satisfactory recovery coincident with the use of measures directed to restore the gastro-intestinal tract to a healthy condition. In some of these cases the patients had previously been regarded as neurotic, and treatment based on that diagnosis had failed to relieve the symptoms. I believe that not a few patients who are at the present time regarded as poor "neurotic" creatures are suffering from intestinal toxæmia, and the "neurotic" manifestations would largely disappear if a correct diagnosis were made and appropriate treatment applied. I have also seen in the course of the last year or two a number of advanced cases of neurasthenia associated with more or less visceroptosis which were also largely the result of a severe intestinal toxæmia. In some of these cases, which will be illustrated later, the results of medical treatment in my hands have been much less satisfactory and in regard to them the question of the advisability of operative treatment has to be considered.

A subgroup of these cases comprises patients whose symptoms are mainly mental. Three well-marked cases of melancholia have lately been under my care, which were clearly shown to be the results of an undetected septic condition of the large bowel. These all made a satisfactory recovery when the condition was recognised and treated appropriately. In two of these cases the primary source of the infection was to be found in the septic state of the teeth and gums. It is probable that most alienists could cite similar cases. Two cases may be cited illustrating the clinical features and the difficulty in deciding the most suitable form of treatment.

CASE 1.—The patient, aged 34, complained of severe constipation and depression, of easily feeling tired, and of a "dead-weight feeling behind the sternum," having to lie down a little every day so as to get energy. The symptoms had existed for over three years and many forms of treatment had been tried. The patient was fairly well nourished

[4] The cases here referred to in detail are selected from a large number prescribed and illustrated by series of radiograms at the meeting.

slightly anæmic, with marked splashing in the epigastric region, stools constipated, and offensive with excess of mucus.

Examination after a bismuth meal showed enlarged proptosed stomach, pronounced ileal stasis after six hours, and very pronounced cæcal and colon stasis, with proptosis of the colon, the condition of things after 72 hours being as shown in Fig. 2.

Careful medical treatment, with prolonged rest, massage, including vibratory massage of the abdomen, intestinal lavage, petroleum, &c., was carried out for a couple of months, the benefit being slight and not permanent. An interesting feature of the case was that the heart hung too vertically (cardioptosis) and there was marked depression on the left half of the diaphragm, for which no adequate cause above the diaphragm could be found. As the patient and her husband are anxious that everything possible should be done to obtain relief I have now no hesitation in recommending operative treatment by a surgeon with special experience of the operation of short-circuiting with or without colectomy.

The second of these two cases illustrates the restricted success which in some instances of chronic intestinal toxæmia follows an operation specially directed to the relief of adhesions in the right lower quadrant.

CASE 2.—The patient, aged 38, unmarried, complained of troublesome symptoms of over eight years' duration. She lacked energy, became too easily tired, and had recurring attacks of indigestion associated with abdominal pain and coming on at irregular intervals without apparent cause. She had had various courses of treatment, such as rest cures, &c. She was a capable and keen woman with a pale, muddy complexion, and her muscular system was soft and flabby. There was occasional localised tenderness in the right iliac and epigastric regions, with slight splashing in the cæcal area, and the stools were very constipated and foul. This condition was very difficult to correct. The urine contained catarrhal cells, white blood corpuscles, and oxalate of lime crystals. Other sources of toxic absorption could be eliminated. The case was clearly one of intestinal stasis with toxæmia of long standing.

An attempt was made to correct the condition by medical means, with rest, vibratory massage, enemas and lavage, and general tonics. Distinct benefit followed this line of treatment, but it failed materially to improve the patient's vigour or her capacity for work, or to get rid of her indigestion. X rays were then taken, and they showed very marked ileal stasis, as seen in Fig. 3, and also general colon and cæcal stasis.

At the operation the cæcum was found to be enlarged and mobile, marked bands were found involving the terminal coils of the ileum, and the appendix was adherent, showing evidence of some old inflammation. The adhesions were liberated, the appendix was removed, and the cæcum was plicated and anchored in position.

Too short a time (four months) has elapsed since the operation to express any definite opinion as to the result of the operation; the patient is markedly better, but the incomplete relief from the indigestion and the present state of vigour lead me to think that the operation has been only partially successful, and has raised in my mind the question as to whether, in view of the clinical facts, a short circuiting operation would not have given more satisfactory results. Four months later the report is more satisfactory, the patient's general health and vigour being much better than it has been for many years previously.

2. *Rheumatoid arthritis.*—As a result of a close study of the disease I have been led to share the view now held by many clinicians as to its infective origin, the source of the infection being invariably one of the three mucous surfaces of the body. In the great majority of cases the infection comes from the gastro-intestinal tract, oral sepsis and pyorrhœa alveolaris being not infrequently primary factors in this intestinal infection; in the remaining cases the infection comes from the genito-urinary tract or the respiratory mucous membrane. With regard to the actual infective agent we have as yet no precise knowledge. For my own part I am doubtful whether the clinical pictures of rheumatoid arthritis, as we see them in their varied manifestations, are due to a single infecting agent. I think it probable that a slow infection by different organisms brings out the pathological conditions that are at present included in the term rheumatoid arthritis.

I am satisfied on this point, that the disease is essentially curable in its early stages, and that if early cases were adequately investigated and the appropriate treatment applied to the main source of infection we would soon see a profound change in the incidence of the disease in the severe forms at present met with. In the latter stages of the disease the intestinal mucous membrane, and especially the large bowel, has been seriously involved, and in some cases it is not possible to correct this by medical means. An illustrative case is here given.

CASE 3.—The patient, aged 52, married, complained of crippling pains in the left thigh, soreness and stiffness in the hands and fingers, sleeplessness, and want of vigour; duration of symptoms, over three years. She had had an attack of appendix trouble a few months before the illness set in and a good deal of digestive disturbance. Objectively there had been typical changes in the joints characteristic of rheumatoid arthritis, considerable muscular atony of the abdominal muscles with some splashing in the epigastric and cæcal regions, foul stools, urine containing many catarrhal cells, a few pus cells, and bacteriologically culture of staphylococci.

Prolonged medical treatment failed to improve the condition of the stools, and a short-circuiting operation was performed by Mr. Alexis Thomson. The patient was immensely benefited by the operation, her general health and vigour being much improved, and the soreness and pains in the joints practically subsided. Sleep is now satisfactory; she has taken no veronal for eight months, which she took regularly the previous two years. The bowels now move rather frequently. The one unfortunate result from the operation has been the tendency to diarrhœa, the bowels moving on an average four times daily.

3. *A "dyspeptic" group.*—This group, arbitrarily called a "dyspeptic" group, is characterised mainly by the symptoms of indigestion. Many cases of this group simulate very closely chronic appendicitis, duodenal ulcer, and gall-stones. A large proportion of patients who have in the past few years had an innocent appendix removed without relief of symptoms have undoubtedly been cases of intestinal toxæmia, in which the primary mischief was in the right lower quadrant of the abdomen, chiefly the cæcum and terminal coils of the ileum. It is interesting to refer to the change in opinion that has occurred in the past few years in regard to various gastro-duodenal conditions requiring surgical treatment. A few years ago ulcers in the duodenum were regarded largely as primary affections of these parts. At the present time Lane, Mayo, Moynihan, and others agree in regarding these as mainly secondary to disease either in the terminal portion of the ileum, cæcum, or appendix, often associated with adhesions and kinks in the bowel. In Lane's view the primary trouble is a stasis in the ileum and cæcum, the appendix trouble being secondary. Moynihan and others attach more attention to the appendix as the primary factor. My experience leads me to accept Lane's teaching on this point. The following is a typical example of this group.

CASE 4.—The patient, aged 45, married, had been under the care of Dr. W. L. Cullen, St. Boswells. She complained of bilious attacks with flatulence, severe headaches, and

loss of weight of several years' duration. She was a poorly nourished, anæmic, tired-looking woman. In the epigastric region there was marked splashing and less marked splashing in the cæcal region, with slight pain on pressure in the latter. The stools were constipated and foul, and the urine contained many catarrhal cells and a few pus cells. Examination with the X rays showed a slightly enlarged and proptosed stomach, and retention of bismuth in the duodenum (Fig. 4), pronounced ileal stasis, as well as marked cæcal and colon stasis.

A course of medical treatment, including careful dieting, vibratory massage, enemas and lavage, was carried out for over six weeks, with very slight benefit, the symptoms returning as soon as the patient began to get about. An operation was decided on, preference being given to the short-circuiting operation.

At the operation, performed by Mr. Alexis Thomson, the stomach was found to be slightly enlarged, the pylorus was distinctly narrowed, the second and third parts of the duodenum were very markedly dilated, and numerous firm adhesions were found involving the terminal coils of the ileum, while bands connected the abdominal wall to the upper part of the ascending colon and to the first part of the descending colon, these findings amply confirming the X ray diagnosis recorded above. In view of the severity of the adhesions it was thought possible that the correction of these and anchoring the cæcum might suffice to give the patient relief. Accordingly the cicatricial bands in relation to the ileum and ascending colon were divided, the raw surfaces that resulted from this were covered with adjacent peritoneum, and the cæcum was anchored by the method of Wilms; all the raw surfaces in the affected areas were smeared with vaseline. The result of the operation, however, has not been satisfactory, it being doubtful whether the patient has derived, or is going to derive, any benefit from it. It is probable that a later short-circuiting operation or colectomy will be called for. Three months later the report is more satisfactory, the patient has benefited considerably from the operation, her condition, however, not being entirely satisfactory.

The results of operative treatment in this case, and I have seen several others with similar results, rather go to support Lane's teaching that the adhesions are more a result than a cause, and therefore treatment directed simply to the correction of adhesions will in most cases prove of little value.

General Remarks on the Operative Treatment of Advanced Cases of Intestinal Toxæmia.

Our views on the value of operative treatment in this group of cases must at present be tentative. The operative procedures requiring consideration are: (1) the treatment of any adhesions or pathological kinks which may be found on examination; (2) reducing the size of the cæcum and anchoring it *in situ*; (3) short circuiting; and (4) colectomy.

With regard to the treatment of adhesions Case 4 indicates a practical difficulty in so far as in some of these cases the benefit following the operation is slight. This must be explained either by the reformation of fresh adhesions or by accepting Lane's view that these adhesions are a result and not a cause of the primary condition. With regard to the operation of plication of the cæcum I have had in the course of the past year a series of seven cases in private practice, in which Mr. Henry Wade has operated and reduced the size of the cæcum, anchored it to the abdominal wall, and severed any adhesions involving the terminal ileum and colon. Great benefit has followed the operation in four cases, the others being much less satisfactory. In the successful cases, the extent to which the benefit was due to the modification of the cæcum or to the correction of the adhesions is unknown. In one case in which the operation was unsuccessful the X ray examination yielded strong evidence which suggested that the stitches plicating the cæcum had given way. On the whole, I am less satisfied with the result of this operation than I was with my first two cases. There is, I believe, much to be said in favour of the wider application of the short-circuiting operation as recommended by Lane in cases that are specially selected. The number and type of cases likely to be benefited by short circuiting can only be determined after a much fuller and more extended experience of that operation in the hands of the skilled general surgeon. The operations of short circuiting and colectomy are open to grave abuse unless they are undertaken only after careful expert diagnosis of the condition and the previous application of a thorough course of medical treatment.

The general conclusions to which I draw attention are as follows.

1. The diseases under consideration are essentially medical conditions, capable of being cured by appropriate treatment if thoroughly carried out in the earlier stages; the question of surgical treatment should therefore seldom arise.

2. There are at present many advanced cases of these diseases in which prolonged medical treatment on the most modern lines produces little or no permanent benefit, and in which benefit may be looked for from appropriate surgical treatment, which effectively reduces the septic absorption from the large bowel. Examination by means of the X rays gives information of very great value in these cases; special attention should be directed to the cæcum, ileum (terminal part), and duodenum, and the results should be studied along with the other clinical findings.

3. The operation of short circuiting as recommended and performed by Lane is a simple one, but its nature is such as may readily lead to unsatisfactory results in less experienced hands.

4. Before any operation is decided upon a prolonged course of medical treatment, carried out with great attention to detail, is indicated.

5. When these medical measures have failed to relieve the operation of short circuiting, possibly combined with colectomy, partial or complete, as recommended by Lane, should be performed.

I have pleasure in expressing my indebtedness to Dr. W. Hope Fowler for the time and trouble he has taken in the investigation of the numerous cases forming the basis of my paper.

Edinburgh.

THE DRAINAGE-TUBE IN ABDOMINAL SURGERY.

BY JOSEPH E. ADAMS, M.S. LOND., F.R.C.S. ENG.,
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OF recent years the value of drainage in the treatment of peritoneal infections has been very seriously called in question, and in an admirable paper published in THE LANCET[1] Cuthbert Wallace gives it as his opinion that "drainage save in true intraperitoneal abscess is useless." He speaks from an extensive experience of every type of intraperitoneal infection, and states further that the surgeon's duty has been performed when the focus of infection is removed and the abdomen closed. This view implies that the faith of the operating surgeon must be placed in the bactericidal properties of the peritoneum rather than in a temporary exit to noxious and infective fluid from the peritoneal cavity. Such an attitude is certainly strengthened by recent investigations

[1] THE LANCET, June 15th, 1912, p. 1603.

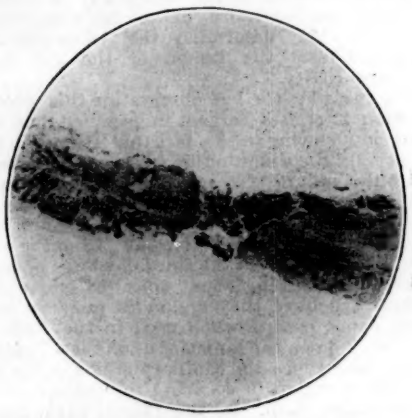
into the bacteriology of the infected peritoneal cavity, though there are still surgeons who advocate multiple drainage in septic peritonitis, and even drainage of non-infected areas to lessen the risk of spread from an infective focus. Wallace considers that the operation in acute abdominal diseases enables the surgeon to deal with the focus of infection and relieve intra-abdominal tension, and whilst I am in the main heartily in accord with his views, I think some consideration of the pathological aspects of the case may be of value.

In a recent work on "Acute Abdominal Diseases"[2] Cassidy and I have pointed out that the resistance of the tissues of the abdominal wall is inferior to that of the peritoneum, and therefore we have advised drainage of the abdominal wall in such operations as those for the removal of an acutely inflamed appendix, and my own experience of such drainage in preference to placing a tube in the peritoneal cavity has been most encouraging. In a good many operations for acute, gangrenous, or suppurative appendicitis, both in adults and children, where a few years back a tube would have been left from the cæcum to the exterior, such tube drainage of the abdominal wall has been entirely successful and reopening of the wound has not once been called for. Wallace admits that complete closure of the abdomen in these septic cases is at times followed by virulent suppuration in the planes of the abdominal wall, and that the patient may die from such septic poisoning and not from peritonitis. Surely, such a catastrophe can be avoided by instituting free drainage of these muscular and fascial planes, and such a step appears to me to be called for in the "relief of tension," for dangerous tension is not merely that of the peritoneal cavity but of the abdominal wall also. This procedure is in keeping with the treatment of diffuse cellulitis, where suppuration is threatened, by multiple free incisions.

On the other hand, there is much truth in the saying that it is better to drain than not to drain, and it is manifestly wrong to close an acute intra-peritoneal abscess; the difficulty lies in the distinction between a true abscess cavity within the peritoneum and an area infected with virulent organisms; if there is no definite space to drain it is probably better not to insert a drainage-tube. The following experimental observations throw some light on this question, but it is abundantly clear that the surgeon requires a knowledge of the bacteriology of his operations before he can truly decide where lie the uses and abuses of the drainage-tube.

To ascertain the changes induced by the presence of a rubber tube in the normal non-infected peritoneal cavity, I introduced a sterile tube into the abdomen of several rabbits; the tubes were passed into the peritoneal cavity amidst the coils of intestine and sutured at one end to the abdominal wall, which was then closed. This does not represent accurately the manner in which they are used in human beings, but the results correspond to the actual changes brought about by the presence of such tubes. I found that in a very few hours lateral openings in the tubes were closed by plugs of inflammatory exudate, and in 24 hours the whole of the tube was plastered over with newly formed fibrin, with numbers of red blood corpuscles and degenerated finely granular leucocytes. Cultures were taken before the introduction of the tubes and at the time of their removal; in all the experiments they remained sterile. The factors which determined these peritoneal changes were: (1) the presence of the foreign body, and (2) the pressure exerted by it; the latter was attributable to the fact of the tube being anchored to the abdominal wall, for in some other experimental cases where similar tubes were placed free in the peritoneal cavity little or no change occurred around them, and they could be easily withdrawn at the end of four days.

In the presence of organisms changes similar to these occur with greater rapidity, but the inflammatory processes do not stop at fibrinous closure of the tubes. One of the known effects of organisms is the liquefaction of the tissues, and therefore tubes in infected areas may be expected to yield fluid exudate. To reproduce in experimental animals the conditions obtaining in the operative treatment of human peritoneal infection is practically impossible, therefore in this direction I have investigated the effect produced by the presence of small infected cotton-wool sponges inoculated with 24-hour cultures of staphylococcus aureus. By analogy I think it is fair to infer that these results represent to some extent changes due to the pressure of foreign bodies in the presence of infection. In two cases out of seven where such infected sponges were used second cultures obtained by removing the sponge and dropping it into a broth tube showed the presence of bacilli as well as cocci; in one case the bacillus coli, and in the other the bacillus proteus, was so recovered, and in both the staphylococcus aureus was still present. The only possible source of these bacilli must have been the lumen of the gut, and the accompanying figure, which shows microscopically the formation



Section of intestine over sponge infected with 0·25 c.c. of broth emulsion of 24-hour agar culture of staphylococcus aureus. The sponge had remained in position for one month. Shows almost complete destruction of the intestinal wall proceeding from the serous to the mucous coat, the gap being filled up with inflammatory cells. This represents an early stage of fæcal fistula. Objective ⅔ inch.

of a fæcal fistula, readily explains the secondary infection of an embedded sponge. Macroscopically the gut over the sponge appeared thickened and inflamed, but stained sections reveal the fact that a portion of the wall is composed almost entirely of fibrin and inflammatory cells. In this connexion I may, perhaps, refer to a short note by Mr. A. E. Maylard,[3] in which he describes the way in which an

[2] Baillière, Tindall, and Cox, London, 1913.

[3] THE LANCET, Feb. 28th, 1914, p. 608.

iodoform gauze plug placed in the abdomen during a gall-stone operation ulcerated its way into the bowel and caused symptoms of obstruction. This was an operation performed in the presence of infection and the passage of the plug into the lumen of the gut was clearly due to infective ulceration from its peritoneal aspect, the site of entry being healed over and protected by adhesions. It was successfully removed some 14 days after the gall-stone operation.

The consideration of the secondary infections of drained wounds would be incomplete without reference to aerial contamination, and whereas such infection may be held to be very rare during the course of an operation it is well known that any wound, abdominal or otherwise, treated by tube drainage for any length of time is apt to yield cultures of such organisms as the bacillus proteus in addition to the original causative bacterium, or this latter may be entirely outgrown by such a contaminating bacillus. It is clear, therefore, that in the case of persistently drained abdominal wounds the primary infection may have added to it organisms from without or within; the former may be derived from the external air or implanted during the dressing of the open wound, the latter may come from the lumen of the bowel as the result of pressure on the bowel wall.

From these experimental and clinical observations the following conclusions appear to me to be justified. 1. That owing to the adhesions which rapidly form around drainage-tubes their value is distinctly limited in the treatment of peritoneal infections. 2. That since the tissues of the abdominal wall possess a much lower degree of resistance than the peritoneum, drainage of the former may frequently be called for where drainage of the peritoneum is not necessary. 3. That the presence and pressure of a drainage-tube in peritonitis may determine the transudation of organisms from the lumen of the gut to the peritoneal cavity.

With regard to the last observation this secondary infection is of less serious importance than might be supposed owing to the fact that the wound area has usually been shut off by surrounding adhesions before this occurs. To prevent adhesions between drainage-tubes and adjacent structures the tube should always be rotated whenever the dressing is done, and its gradual withdrawal from the wound should be begun from the third day after operation. I have said nothing about so-called gauze drains because I believe they are more properly termed gauze dams, except when used in the form of a small wick down the lumen of a tube as a "cigarette drain," and there the capillary action of the gauze may be of value in securing the escape of thin inflammatory fluid. In the case of thick pus they more often act as a cork at the orifice of the wound than as an external drain.

As to the value of the Fowler position and the pelvic drainage-tube there is still some difference of opinion. I think there can be no doubt that the former represents the ideal attitude of the patient both for the surgeon and the nurse during the early days of abdominal convalescence, and it seems clear that the complications of subphrenic, perisplenic, and other residual abscesses have been greatly reduced in frequency by its adoption. Pelvic drainage-tubes do not appear to form adhesions quite as readily as those in other situations, and when the tube is correctly placed so that its deep end lies about half an inch from the bottom of the pelvic basin drainage even in this uphill fashion can be secured for the first few days of convalescence.

At the present time it seems totally irrational to be a slavish adherent to the policy of either always draining or never draining, but it appears to me that much of the drainage of the peritoneal cavity now practised would be better limited in scope to the abdominal wall alone.

Devonshire-place, W.

THE WILD MONKEY AS A RESERVOIR FOR THE VIRUS OF YELLOW FEVER.

BY ANDREW BALFOUR, C.M.G., M.D. EDIN., F.R.C.P. EDIN.,
DIRECTOR-IN-CHIEF, WELLCOME BUREAU OF SCIENTIFIC RESEARCH.

THE possibility of the wild monkey acting in certain places as a reservoir for the virus of yellow fever is a very interesting one. On my way to the West Indies I was told by a lady, Mrs. Randolph Rust, who has been long resident in Trinidad, that the old negroes there say they can always tell when there is going to be an epidemic of yellow fever in the island owing to the fact that prior to its appearance the red howler monkeys are found dying and dead in the High Woods. In view of Manson's injunction to search for a reservoir of the virus amongst some of the lower animals this negro belief struck me as curious and interesting, though naturally one did not place overmuch credence in it. Still it seems worthy of investigation, and Mr. Randolph Rust, the chief pioneer of the petroleum oil industry in Trinidad, whose land is in the south of the island at a place where monkeys abound, kindly promised to make further inquiries.

When I finally reached Port-of-Spain this question of the monkey assumed fresh interest and importance. Dr. H. L. Clare, the Surgeon-General, gave me particulars regarding the recent small outbreak of yellow fever at Brighton near the pitch lake in the south-west of Trinidad. He told me that the origin of the infection was shrouded in mystery, for there was no question of importation from the mainland or elsewhere, and, so far as could be told, there had been no mild cases of fever or illness amongst the coloured employees of the American company which is boring for oil in this vicinity. Further, the two men first attacked were employed during the day on an oil bore situated at the end of a road which had recently been cut for eight miles into the dense virgin forest. In this locality the red howlers occur, though they are only seen as a rule in the early morning. I told Dr. Clare the story about the negro belief. He had not heard of the latter, but was much interested, and agreed that it merited careful inquiry and investigation. At a later period I found several people who knew all about the negro view, but it had not struck them as deserving special attention. Mr. Rust got hold of his chief hunter, who confirmed the negro statement in every particular, and said that before the last large epidemic of yellow fever in Trinidad the red howlers were found dying and dead in large numbers. Further confirmation was forthcoming from Mr. F. W. Urich, entomologist to the Board of Agriculture, an acute and trained observer, who told me that he himself had seen the monkeys lying dead, and at the time thought they had probably perished from the effects of a protozoal

blood parasite. He had not, however, specially associated this mortality with the subsequent outbreak of yellow fever.

Dr. Clare very kindly let me see the report written by Mr. A. L. George, the colonial medical officer who was sent to make inquiries as regards the Brighton outbreak. Briefly, the chief points are as follows. There were 10 cases of undoubted yellow fever, 9 amongst Americans, 1 in a Trinidadian. Three of the cases, including the first, proved fatal, and the diagnosis made by Dr. Campbell, medical officer to the Petroleum Company, was confirmed by post-mortem examination made by Dr. J. R. Dickson, who has charge of the public health laboratory at Port-of-Spain. It is only necessary to consider here such facts as may have a bearing on the monkey question.

Case 1, an American, had been five days in Trinidad. He had been in the West Indies before for one and a half years. He took ill on Nov. 21st, 1913, and the illness, as stated, terminated fatally. Case 2, an American, had been one year and seven months in Trinidad. He had never been in Trinidad prior to this period of residence. *He was also attacked on Nov. 21st, 1913*, and though he had the black vomit recovered. Cases 3, 4, and 5 were all attacked on Dec. 5th, 1913. Cases 3 and 4 were living at a bungalow in the forest, and Case 5 worked in the forest during the day, returning to Brighton at night. These three cases and those following them can all be explained by the ordinary man-mosquito infection, but the first two cannot be so easily accounted for and require some consideration. Case 1 had arrived in Trinidad from the Venezuelan mainland five days before being struck down, but Case 2, *who was taken ill almost at the same time as Case 1*, had not been out of Trinidad for one year and seven months.

Mr. George in his report expressly states: "There is not the slightest evidence that the disease was conveyed here from any outside source." His own view was that in all probability there must have been a mild unrecognised case amongst the coloured population, but he did not think this very probable, and it was admitted that the source of the outbreak was very puzzling. At my request Dr. Clare most kindly accompanied me to the oil-fields on Feb. 14th. The last case of yellow fever, and one which had terminated fatally, had occurred on Dec. 30th, 1913.

I had the pleasure of meeting Mr. George and Dr. Campbell and discussing the matter with them. It was ascertained that the two men first and well-nigh simultaneously attacked were, as already stated, working on an oil well at the end of the new asphalted motor road which had been cut into the heart of the High Woods, and which is a remarkable, indeed wonderful, engineering exploit. Further, it was found that these men spent ten hours a day on the oil-fields, going there every morning from Brighton and returning every evening. A bungalow stood in the clearing at the end of the road, and at the time of his inspection Mr. George found stegomyia fasciata vel calopus breeding there. I was informed that monkeys occurred in the woods, but there was nothing to show that they had been sick or dying. Attention had not been directed to the question. A point of interest is that there exists in these High Woods a forest species of stegomyia—namely, S. sexlineata—which closely resembles the known yellow fever carrier.

I had hoped to secure some specimens of blood from monkeys, but though I penetrated a short way into the forest, an education in itself, I saw nothing of the animals, which can only be approached when they are feeding, and then only by hunters familiar with their habits. It would, however, be interesting to examine the blood of these red howlers, both in the case of healthy and sick individuals, if the latter can be obtained. If Seidelin's paraplasma flavigenum was found to occur in their red cells it would certainly be a remarkable coincidence and perhaps go some way towards establishing the importance of the negro belief. At the same time there may be nothing in the latter.

Thanks to the kindness of Dr. Clare, to whom I am greatly indebted for much assistance when in Trinidad, of Mr. George, Dr. Campbell, and Mr. Urich, who also helped me greatly, I hope eventually to procure specimens of monkey's blood from Trinidad. In any case Dr. Clare intends to make further inquiries, so that possibly fresh light may be thrown on the question. My own time was, unfortunately, very limited, as I had a long journey before me. An attempt to get at monkeys in another part of the island ended in failure.

From Trinidad I proceeded to Ciudad Bolivar on the Orinoco, but yellow fever is rare there and, according to Dr. T. W. Parry, only imported cases occur. I was, however, told by a Canadian mining engineer that in the vicinity of Maracaibo in north-western Venezuela it had been noted that the men of the Caribbean Petroleum Company who caught yellow fever were those employed out in the bush. Accordingly, I decided to go to Maracaibo and prosecute inquiries there. On my way I visited Caracas and met Mr. Proctor, the manager of the company in Venezuela. He told me that my information was erroneous, and that the men attacked had all been resident in the town of Maracaibo. He had been much interested in the Trinidad outbreak, and informed me that, being greatly puzzled as to its origin, he had written to New York asking if monkeys were known to suffer from yellow fever as they were almost the only wild animals found near the oilfields. This is interesting as showing the view of a layman conversant with the local conditions.

On reaching Maracaibo I had the pleasure of meeting Dr. J. M. Coates Cole, who is ably upholding the prestige of British medicine in this out-of-the-way part of the world. He confirmed Mr. Proctor's statement. It seems that monkeys are not found at Maracaibo itself, but they occur along the banks of a river some 50 miles distant, and are also found abundantly in the bush on the other side of the lake, which, opposite the town, is some eight miles across. I could learn nothing about epidemics amongst monkeys there, but have set inquiries afoot and hope to obtain information through Dr. Cole, who knows the district well. Here I had an opportunity of reading the interesting paper by Dr. J. W. Scott Macfie and Dr. J. E. L. Johnston in the Proceedings of the Royal Society of Medicine, Vol. VII., No. 3, and I trust these observers will direct their attention to the monkeys of the West Coast of Africa.

The conditions in Trinidad were so interesting that, with Dr. Clare's kind permission, I wrote to Mr. H. J. Read, C.M.G., at the Colonial Office, suggesting that workers on the West Coast and elsewhere should be asked to make inquiries as regards monkey mortality, and to secure the blood of monkeys for examination.

There must, of course, be many places where

monkeys can play no possible part in the etiology of yellow fever. Such a place is Curaçao, where there are no monkeys, but where yellow fever is said to be endemic and where certainly from time to time epidemics occurred, notably when warships from Holland containing non-immunes visited the island. At the same time, wild monkeys may conceivably act as a reservoir of the virus, be this Seidelin's bodies or some unknown parasite, in certain localities; and if such proved to be the case some puzzling outbreaks, like the recent one in Trinidad, would be explained. In any case it certainly seems advisable to direct attention to the possibility, and in this connexion I would cite a passage in a paper by Dr. J. Martinez Santamaria on the Tropical Diseases of Colombia which appeared in the *Journal of Tropical Medicine and Hygiene* of April 1st, 1913. Speaking of yellow fever he says:—

> This occurs endemically and at long intervals along the Atlantic coast, Cucuta, all along the shores of the Magdalena river, and at the Muyo emerald mines. The last focus is important, as it is situated right in the middle of the country and in an uncultivated and isolated zone, with no possible communication with the Magdalena River, from which it is separated by thick and immense forests. The epidemic there is quite independent of the other focus. For the last ten years we have not had a single case in the Magdalena zone, while in Muyo three epidemics have occurred.

I am now on my way to Colombia, where I hope to obtain some more information as regards the possible association of the wild monkey, and more especially the red howler, with the occurrence of yellow fever.

Curaçao.

VACCINATION AGAINST HAY FEVER:

REPORT OF RESULTS DURING THE LAST THREE YEARS.

[BY JOHN FREEMAN, M.D. OXON.,

ASSISTANT IN THE INOCULATION DEPARTMENT AND ASSISTANT BACTERIOLOGIST, ST. MARY'S HOSPITAL, LONDON.

IN 1910 and the early part of 1911 the late Mr. L. Noon worked at active immunisation against hay fever by inoculations with a pollen vaccine. He was compelled by an illness which proved fatal to stop this work in the spring of 1911 before it had been actually put to the test in a hay fever season. He published his methods of work up to date in THE LANCET of June 10th, 1911. I was able to give the first results of my colleague's method of treatment as proved by the summer of 1911 in a paper published in THE LANCET of Sept. 16th, 1911, and I now propose to give further results.

Table I., How Compiled.

In the table given below the results are shown in the case of 84 patients with English hay fever who have been inoculated with phleum pratense pollen. The first 18 in the list were inoculated before the summer of 1911; the figures in brackets correspond to the serial numbers in the report of these cases published in THE LANCET of Sept. 16th, 1911. Nos. 19 to 43 were inoculated before the summer of 1912, and Nos. 44 to 84 were inoculated before the summer of 1913. This list of 84 cases is a complete one, and therefore includes cases which received inadequate treatment.

In the case of many patients it was found convenient, after they had undergone the preliminary eye-testing and had received from me the initial inoculations, to have the treatment continued by the local practitioner. In nearly all these cases the treatment was carried out as well as possible, but there were exceptions, which are dealt with under heading No. 2 when dealing with the discrepancy in result.

The value of the symbols by which the various results have been indicated is shown underneath the table, and some further indication of the standard of marking may be gained by comparing the marks here awarded to the first 18 cases inoculated in the year 1911 with the more detailed report of these same results published in the earlier paper.

The results here recorded have in nearly all cases been derived from the patient's own report. For instance, whenever the patient has reported after the hay fever season that the doses "did not seem to make much difference," the result has been recorded by the symbol "0." In the two cases where the "—" sign has been employed there was no suggestion that the treatment had been injurious, and the "0" would, in my opinion, have been more in accordance with fact. Nevertheless, since the reports of the patients suggested that the benefits received from treatment had been a minus quantity, that result has been ruthlessly recorded.

TABLE I.

Cases.	1911.	1912.	1913.	Cases.	1912.	1913.	Cases.	1913.
1 (1)	+++	.....	.....	29	0	.....	57	++
2 (3)	0	.....	.....	30	++	.....	58	+
3 (4)	++	.....	.....	31	++	.....	59	+
4 (5)	+++	+++	.....	32	+++	+++	60	++
5 (6)	+++	+++	+++	33	++	.....	61	+
6 (7)	+	.....	.....	34	+	.....	62	+
7 (8)	++	.....	.....	35	++	+++	63	+
8 (9)	++	++	+	36	.....	++	64	++
9 (10)	0	+	+	37	+	.....	65	0
10 (11)	++	+	.....	38	++	+++	66	++
11 (12)	+++	+++	+++	39	++	+++	67	+++
12 (13)	++	.....	.....	40	+	++	68	++
13 (14)	++	++	.....	41	+	++	69	+++
14 (16)	++	+++	.....	42	+	.....	70	++
15 (17)	+++	.....	.....	43	0	++	71	+++
16 (18)	+++	.....	.....	44	.....	+++	72	+
17 (19)	+	++	.....	45	.....	+	73	++
18 (20)	+	++	+	46	.....	+++	74	0
19	.....	+	++	47	.....	0	75	0
20	.....	++	++	48	.....	+++	76	++
21	.....	++	++	49	.....	+++	77	+
22	.....	+	+	50	.....	-	78	++
23	.....	+++	.....	51	.....	0	79	0
24	.....	++	.....	52	.....	+++	80	++
25	.....	+++	+++	53	.....	+++	81	+
26	.....	++	+++	54	.....	+++	82	+++
27	.....	—	.....	55	.....	0	83	++
28	.....	++	+	56	.....	+++	84	+++

The symbols by which the results in each year are indicated have the following values: +++ = complete freedom from hay fever, or only the most insignificant symptoms. ++ = hay fever symptoms greatly diminished. + = hay fever symptoms diminished, but only to a slight degree. 0 = symptoms unchanged. — = symptoms worse. ..... = patient not inoculated in that year.

Results.

It will be seen from the table that the average of success shown in the earlier paper has been fairly well maintained in the succeeding years, both with the old cases and with the cases commenced since then. For the convenience of the reader they are here abstracted. The 84 cases have between them experienced 113 hay fever seasons

after—or under—treatment. The results of these summers are as follows:—

In 34 seasons (30·1 per cent.) the hay fever was completely cured or was so slight as to be insignificant.

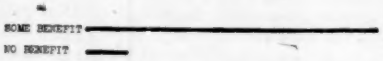
In 39 seasons (34·5 per cent.) the hay fever was greatly diminished.

In 27 seasons (23·9 per cent.) the hay fever was admittedly diminished, but only to a slight extent.

In 13 seasons (11·5 per cent.) the hay fever was no better, and of these, two cases reported that they were worse.

This result is recorded in diagram form, thus:—

Or thus:—



The Experiential Method[1] *of Judging the Results.*

Anyone scanning Table I. and bearing in mind the reasons for its diversity of results will probably come to the conclusion that treatment is justified by statistics. They should be warned that (as is inevitable in medical statistics) such cases vary greatly in almost every important particular—e.g., the individual symptoms, the habitat of the patient, severity of the disease, amount of treatment, and the presence of complications.

But few people, and these only in rare circumstances, act on statistics. They act instead on experience, either of themselves or of others; and it seems desirable to consider what, in my experience, makes me convinced that this line of inoculation treatment is emphatically successful. When this is done, all the cases which, from their nature, approximate to the condition of crucial experiments, will come uppermost in the mind, and the other cases which, from conflicting circumstances, were very far from crucial experiments, will have relatively slight influence on the judgment in a general review of past treatment. The dramatically successful cases will affect the judgment powerfully in one direction, and the unmitigated failures will affect the judgment as powerfully in the opposite direction.

All the cases recorded in Table I. with the "+++" sign after them are satisfactory as far as results go and are all eminently quotable. As the eye runs over the cases one remembers the patients' remarks: No. 1, "Scot free"; No. 4, "farming for pleasure"—he who used to fly to the North of Scotland; No. 5, "going for walks to kick his old enemy the hay"; Nos. 7 and 8, invoking blessings and admitting the worth of the treatment, according to their different temperaments; No. 11, talking of "marvellous cures," ..... and so on; all very satisfactory and pleasant, but not so impressive as the cases where the long-continued, pitiable, and even desperate, previous condition made possible a profound change as the result of treatment, and rendered an accidental improvement almost an impossibility. For instance:—

CASE 20.—In awarding this case the "++" and "+++" signs of successful treatment no adequate idea is given of the remarkable difference between the patient's experiences during the two summers after inoculation and the summers of the previous 24 years. It was the worst case of hay fever I have ever met with. This opinion as to the severity of the case is emphatically confirmed by men of great experience of ophthalmic and nose and throat cases.[2] The inflammation of the conjunctival sacs during an attack was sometimes so intense that the conjunctiva peeled off the eyelids, leaving uncovered sore places. The continual dribbling of tears over the cheeks left them excoriated and intensely tender. The sensation of burning in the eyes was so severe that icebags were applied for long periods to give relief. Together with this the constitutional disturbance from the pollen poisoning was great, rendering the man incapable of work; for example, during hot weather in June the feet would become quite bloodless, and hot water bottles had to be applied to the extremities. For 19 years on end the patient, although absolutely dependent financially on his own personal exertions in business, was compelled to leave his work to take care of itself, and go for voyages in an ocean-going ship. Fortunately the severity of his troubles rendered him amenable to long-continued treatment, and after a very systematic inoculation carried on through the whole of the preceding winter and spring, he was able in the summer of 1912 to go on with his work in London in comfort; and in the summer of 1913 he was absolutely immune, going for bicycle excursions through hayfields during the week-ends.

CASE 32.—This case also gives no idea of the severity of the trouble from which the patient has been rendered immune. In this instance the asthma was so intense that the patient's father, who is a medical man, told me that he had been in grave fear of the death of his son from asphyxia and exhaustion. In 1913 the boy was immune except for a slight attack of conjunctival irritation one afternoon during an expedition in the country at the height of the hay fever season.

When one can call to mind such cases and others like them, one is driven to the conclusion that the method of treatment will work marvellously well on occasion. On the other hand, there are the disappointments, some of which are capable of explanation.

Explanation of Discrepancies in Result.

1. In the first place the bad result may be due to the amount of treatment the patient has received. No. 43 will serve as a case in point. In 1912 the patient did not come for treatment till the middle of June, and then only received two inoculations—result "0"; whereas in 1913 he came in March and received eight doses—result "++." It is for this reason that cases treated by me at the Inoculation Department, St. Mary's Hospital, have on the whole given rather better results than private patients because hospital patients will submit to treatment at Christmas or even earlier, if they are advised to do so, while private patients will for various reasons seldom submit to this. On the other hand, it must be admitted that some people demand a "cure" within a week or ten days, and

[1] A. E. Wright on the Pharmaco-therapy of Pneumococcus Infections, and the Methods by which such Therapeutic Problems ought to be Investigated, THE LANCET, vol. ii., 1912, pp. 1633, 1701.

[2] Dr. W. A. Brailey, Mr. Charters J. Symonds, and Dr. H. L. Gregory.

somewhat to the surprise of the inoculator get what they ask for.

2. One reason for a bad result will disappear when the principles of vaccine therapy are better known—e.g., a practitioner who was continuing the treatment of a patient in the country had been supplied with several correct doses, and a letter was received from the patient saying that, "wishing to be in the best possible form at a flower show, the doctor gave me two doses at once." The result was naturally disappointing. (Case No. 47.)

3. Bacterial catarrhs of the air-passages may be an addition to, or a complication of, these pollen poisonings which constitute hay fever. When these two diseases are present together they seem to form a vicious circle; the bacterial catarrh seems to make the patient more prone to pollen poisoning, and the sodden condition of the mucous membranes produced by hay fever is an open invitation to any bacterial infection. No. 2 is a case in point. The patient suffered from a chronic nasal infection and sinusitis, and indeed had been for long inoculated against this with a streptococcus and diphtheroid vaccine. In addition he was found to have hay fever by the eye-reaction test; pollen vaccine failed to give him relief. Such cases are difficult to treat, and it is difficult to say which symptoms are due to the bacterial infection and which to the pollen poisoning. It is for this reason that many men have believed that hay fever is itself a microbic infection, and claim (no doubt with justice) that they have rendered great benefit with a bacterial vaccine. Vaccines made from Friedländer's B. pneumoniæ, streptococci, M. catarrhalis and pneumococci have all been used against hay fever and, it is alleged, with success. Those who would ascribe to bacteria more than a secondary rôle in hay fever should note that most hay fever patients have little or no bacterial infection of the nose passages during the summer, while the bacterial catarrhs which do occur in hay fever patients are not all due to one particular organism.

4. No. 8 is hardly a success, but the circumstances are unusual. It is the case of a university professor who lives practically in a botanical garden full of exotic plants. The inoculations work fairly well so long as he is away from home, but when he returns he collapses. The causal agent of hay fever in Europe is grass pollen and the professor may be considered to be, botanically speaking, outside Europe.

These four points account for a considerable proportion of failures or partial failures in Table I., but after all the explanations there remains an inexplicable residue. No. 29, perhaps, had too little treatment, No. 51, however, should have had sufficient, and No. 55 (a hospital case) had very systematic treatment, and yet seemed to receive no benefit. In the present state of our knowledge such cases may be credited, if we so please, to the idiosyncrasies of the patients.

In reviewing the cases which have shown these differences of result one gains the following impressions:—

Patients with marked constitutional disturbances, including asthma, do better than patients with slight and local symptoms.

Patients with an inherited tendency do better than people without such tendency.

Age makes no difference to the benefit derived from treatment.

How Long Does the Effect of Treatment Last?

Patients naturally wish to know whether they must be inoculated every year, or whether one successful series of inoculations will last for more than one year, or possibly last for ever. Three hay fever seasons have passed since the inoculations were first commenced.

In Table II. the results during the years in which the patients were inoculated is given on the left-hand side of the table, while the after-effects in the years during which the patients were not inoculated is given on the right-hand side of the table. It will be seen that where a patient has been inoculated for one year with complete success

TABLE II.

Case.	During treatment.		No treatment.	
	1911	1912	1912	1913
4	+++	+++		+++
14	++	+++		++
16	+++		+++	+
1	+++		+++	+
15	+++		++	
23		+++		++
13	++	++		+
17	+	++		0
10	++	+		0
12	++		++	0
3	++		+	0
7	++		+	0
36		++		+
24		++		0
31		++		0
33		++		0
6	+		0	0
34		+		0
37		+		0
42		+		0

The cases have the same numbers as in Table I., but are here arranged according to the completeness of the immunisation. The symbols have the same value in both tables.

he has in the next year complete, or almost complete, immunity, but that in the third year he has only slight immunity left. Where patients have been successfully inoculated for two years they have, as might be expected, complete immunity during the third year, and time will show how long this complete immunity will last. Where patients have been only partially immunised for one or two years, little if any immunity is carried over to the year during which they have ceased the inoculations.

Conclusion.

Hay fever treatment by active immunisation with a pollen vaccine, whether judged by statistics or by the experiential method, has succeeded, and the immunity thus acquired seems to last for one year at least after treatment has been discontinued.

Devonshire-place, W.

MUNICIPAL HONOURS FOR MEDICAL MEN.—At the last meeting of the Glastonbury town council Dr. Maurice John Doidge was elected an alderman for the borough.—At the recent election for members of the Stonehouse urban district council Mr. William Edward Manderson Corbett was returned at the head of the poll.—Mr. Alfred Probus Trinder has been elected a member of the Wadebridge urban district council.—Mr. George Lestock Thornton has been elected chairman of the Exmouth urban council.

THE USE OF OMNOPON-SCOPOLAMINE COMBINED WITH LOCAL ANÆSTHESIA IN OPHTHALMIC SURGERY.

BY A. MAITLAND RAMSAY, M.D. GLASG., F.R.F.P.S. GLASG.,

OPHTHALMIC SURGEON TO THE ROYAL INFIRMARY, GLASGOW; AND LECTURER ON DISEASES OF THE EYE IN THE UNIVERSITY OF GLASGOW.

Omnopon or pantopon—the name by which it is known on the continent of Europe—was introduced by Professor Sahli, director of the medical clinic at Berne. He was anxious to obtain the full therapeutic effect of opium by hypodermic injection, and asked Hoffmann-La Roche and Co. to produce a preparation of opium in which the total alkaloids would be in a soluble form and free from all inert and irritating matters. In opium the natural alkaloids exist in the form of almost insoluble meconates, but after a series of experiments a preparation was produced in which they were present as readily soluble hydrochlorides. Omnopon forms a light brown powder, five times the strength of opium, and contains the alkaloids in the same proportion as in the crude drug. It is usually prescribed as a 2 per cent. aqueous solution to which 25 per cent. of glycerine is added as a preservative. It may be given by the mouth, but in most instances it is more convenient to administer it by hypodermic injection. It is supplied for that purpose in sterile ampoules, each containing 1 c.c. of the 2 per cent. aqueous solution of the drug. It was soon discovered that the good qualities of omnopon were greatly enhanced by combining it with scopolamine, and omnopon-scopolamine is now preferred by many to the better known morphine-scopolamine preparation. The average dose for an adult is $\frac{2}{3}$ grain of omnopon and 1/150 grain scopolamine.

An article in THE LANCET of Sept. 2nd, 1911, by Mr. H. M. W. Gray first directed my attention to omnopon. In that paper Mr. Gray advocates its use as an adjuvant to local anæsthesia, and gives an up-to-date bibliography of the use of the drug in medical practice. I began to use omnopon in my operative work in November, 1911, and with increased experience of its value have come to rely upon it more and more when operating upon patients to whom in former years I would have given a general anæsthetic. It is true that since the introduction of cocaine, chloroform and ether are used much less frequently in operations upon the eye. The use of cocaine by itself, however, does little to allay a patient's nervousness and restlessness. Local anæsthesia may be perfect, but the mind of the patient is not at ease. He is alert and apprehensive, and in consequence has difficulty in keeping himself under proper control. The use of omnopon, however, acts as a sedative to the brain, makes the patient feel calm and self-possessed, and thereby helps the surgeon to perform the operation easily and satisfactorily.

On the whole, omnopon acts best in elderly patients, and may be safely given in cases where the administration of a general anæsthetic might be attended by considerable anxiety and danger. I have used it only when operating upon adults, but Mr. Gray states that "in juveniles above 13 the effect has been quite satisfactory." To young subjects he gives half the dose usually prescribed for an adult.

If a patient is to have omnopon he should be prepared as he would be for a general anæsthetic. An hour and a half before the time fixed for the operation the contents of a 1 c.c. sterile ampoule are injected into the muscles of the gluteal region. The patient ought to be in bed during the interval of waiting, and if the room be darkened and care be taken that he is not disturbed by noise he will usually rest quietly or sleep until it is time to carry him to the operating table. He ought never to be allowed to walk or to be roused more than can be avoided. If a single dose is not enough to induce sleep, an additional half dose is injected an hour after the first. This extra dose is rarely necessary; it can, however, be administered without risk, and ought always to be given if the patient be nervous and excitable. It is essential that the patient be thoroughly under the influence of the drug. He wakens up while he is being carried to the operation room, answers questions, and may even engage in conversation, but if the dose of omnopon be sufficient he is quite free from excitement or from any feeling of nervous dread or apprehensiveness. If he be let alone for a few minutes after he is placed on the operating table he usually falls asleep, but he wakens at once when he is spoken to, and he is ready to assist the operator by voluntarily turning his eye in whatever direction may be necessary.

The local anæsthetic employed is a 2 per cent. aqueous solution of cocaine hydrochloride, which is dropped three times into the conjunctival sac at an interval of five minutes between each instillation. If the anæsthetic is to be injected beneath the conjunctiva or under the skin a 2 per cent. solution of novocaine, to each ounce of which 30 minims of adrenalin chloride (1 in 1000) have been added, is employed.

I have used omnopon-scopolamine as an adjuvant to local anæsthesia in the following operations upon the eyeball and its appendages—cataract extraction, iridectomy in iritis and in acute glaucoma, irido-sclerectomy in chronic glaucoma, plastic operations on the eyelids, extirpation of the lacrymal sac, and enucleation of the globe. In these different operations omnopon-scopolamine acted least satisfactorily in extraction of senile cataract, because it made the patient so drowsy that the eyeball constantly tended to roll upwards, and thereby hindered the delivery of the lens. No general sedative is as a rule necessary in operations for cataract, but the patients to whom I gave omnopon-scopolamine were abnormally nervous and restless. Although the use of the drug in no way facilitated the actual operation, the after effects were all that could be desired, for the patients fell asleep almost immediately after being taken to bed, and slept soundly for several hours. Its analgesic and soporific effects are most helpful to restless patients during the first hours following an operation, for the drug possesses few disadvantages; no period of excitement precedes sleep, and neither pulse nor respiration is markedly affected.

The pulse-rate may for a short time be slightly accelerated, but it very soon returns to normal, while the respirations, although slow, are regular and deep and never stertorous. The face sometimes is flushed, but there is no lividity. The patient sleeps soundly and quietly, but is easily roused. He sometimes complains of thirst, and readily takes any liquid offered to him. While awake he talks quite coherently and intelligently, but on the following morning he has no recollection of what

he has said, and is often very much surprised when he is told that the operation has been performed. Sickness and vomiting occur very rarely, there is no complaint of headache or of giddiness, and on the morning after the operation the patient is usually free from any effect of the drug.

Before iridectomy or before advancement or tenotomy of the recti muscles local anæsthesia may be rendered perfect if, after cocaine has been instilled into the conjunctival sac, a few drops of novocaine-adrenalin solution be injected beneath the conjunctiva at the site of the operation wound. This method has the additional advantage in irido-sclerectomy that it greatly facilitates the formation of a large flap of conjunctiva.

In plastic operations on the eyelids infiltration anæsthesia is employed. After the skin has been disinfected the novocaine-adrenalin solution must be injected freely and allowed to act for 20 minutes before the operation is begun. At the end of that time the skin over the area affected by the anæsthetising fluid is distinctly blanched owing to constriction of the blood-vessels, and consequently hæmorrhage during the operation is rarely troublesome. If the local anæsthesia be carried out properly, and a sufficient dose of omnopon-scopolamine has been administered, the patient sleeps quietly, and unless he is spoken to gives no indication that he is aware of anything being done to him.

In extirpation of the lacrymal sac, if the local anæsthesia is to be satisfactory, great care must be taken to follow the technique recommended for the injection of the novocaine-adrenalin solution. The skin of the side of the nose and of the eyelids should be disinfected by painting it with a 3 per cent. tincture of iodine. The needle of the hypodermic syringe, which has been carefully sterilised, is then inserted along the line of the primary incision, and as it is being withdrawn the novocaine-adrenalin solution is injected slowly into the cellular tissue around the track of the needle. The lacrymal sac is filled with the anæsthetising fluid by the inferior canaliculus, and after waiting a few minutes deep injections are made, one above the dome of the sac and another below the internal tarsal ligament. The hypodermic needle must be inserted deeply until its point strikes the bone and the fluid is forced into the tissues around and behind the tear sac. Twenty minutes should elapse before the operation is begun, because all that time is necessary for the novocaine-adrenalin to exercise its full effect on the nerves and blood-vessels. The infiltration method of anæsthesia has been objected to on the ground that the œdema of the tissues obscures landmarks and alters the natural relationship of structures, so that the operation is rendered more difficult. Dr. E. Seidl[1] has recently proposed a method of "conduction anæsthesia" in extirpation of the lacrymal sac, and claims for it that both anæsthesia and ischæmia are complete and that no œdema is present in the tissues to be operated on. It consists in applying novocaine-adrenalin solution to the nerves supplying the tear sac and superjacent skin at some distance from the actual field of operation. The technique is simple and easily followed, and in the few cases in which I have employed Seidl's method the results have been quite satisfactory. It has, however, the drawback that in some cases considerable ecchymosis of the upper lid and slight exophthalmos follow the injection.

For enucleation of the eyeball the majority of surgeons would prefer to have the patient under the influence of a general anæsthetic, but the operation can be performed painlessly and with entire absence of shock if omnopon-scopolamine be employed as an adjuvant to local anæsthesia. There need be no hesitation in employing this method in any case where a general anæsthetic is contraindicated or where a patient is unwilling to take ether or chloroform. After the conjunctival sac is anæsthetised by the instillation of cocaine the novocaine-adrenalin solution is injected beneath the conjunctiva over the insertion of the four recti muscles. A Siegrist's needle is then passed deeply into the orbit and the anæsthetising fluid injected into the tissues behind the eyeball. I usually insert the needle at each quadrant of the globe between the recti muscles and inject about 5 minims of the solution at each puncture. After waiting for 20 minutes the eyeball can be enucleated without pain and with the minimum of hæmorrhage.

The success of these operations undoubtedly depends in large measure on the perfection of the local anæsthesia, but the addition of omnopon-scopolamine adds greatly to the comfort both of the patient and of the operator. The former is in great measure oblivious to what is going on, and the latter is not disturbed during the operation by restlessness and nervous apprehensiveness on the part of the patient.

Glasgow.

[1] Graefe's Archiv für Ophthalmologie, 87 Band, Heft 1.

EXTRAPERITONEAL URETERO-LITHOTOMY THROUGH A MEDIAN SUPRAPUBIC INCISION.

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With Remarks by JOHN MORLEY, F.R.C.S. Eng.,
SURGEON TO THE HOSPITAL.

THE following case, which was under the care of Mr. John Morley in Ancoats Hospital, Manchester, may be of interest to readers of THE LANCET.

The patient, a youth aged 20, was lying in bed convalescent after an operation for radical cure of a right inguinal hernia performed ten days before, when he was seized with a sudden attack of pain in the left loin, shooting down into the groin. The previous history was as follows. At the age of 7 he had acute retention of urine from a stone impacted in the penile urethra. This was removed by external urethrotomy. In his eleventh year, after left renal colic and hæmaturia, a stone was removed from the bladder by a suprapubic incision. Another vesical calculus was removed at the age of 15. When 16 years old a radical cure of left inguinal hernia was performed.

On admission to hospital on Oct. 1st, 1913, for radical cure of his right inguinal hernia, he made no complaint of left lumbar pain, but after the present attack he admitted that he had suffered from two or three similar attacks during the last few weeks before admission. The attack of renal colic that occurred whilst he was under observation was of short duration. The urine, examined shortly afterwards, was as follows: reaction acid;

specific gravity 1022; trace of albumin; no blood; no deposit. An X ray examination showed a calculus of the size of a sparrow's egg impacted in the lower end of the left ureter.

An operation was performed on Oct. 24th under spinal anæsthesia (stovaine-glucose Billon). Cystoscopic examination having revealed no abnormality of the left ureteric orifice, the bladder was opened by a median suprapubic incision. The calculus could be palpated near the ureteric orifice by a finger in the bladder, but this procedure caused it to slip upwards in the ureter, and transvesical removal was plainly impossible. By free retraction of the left rectus and extraperitoneal dissection the left ureter, which was dilated and thickened, was exposed at the point where it crosses the pelvic brim, at the bifurcation of the common iliac artery. A sling of stout pedicle silk was passed round it with an aneurysm needle and held with artery forceps. With one finger in the bladder and one outside, the stone was then pushed up from the depths of the pelvis to the pelvic brim. Here it was held against the silk sling, whilst a second loop of silk was passed round the ureter below it. Thus steadied and exposed, the smooth oval stone was removed through a longitudinal incision. The opening in the ureter was closed with fine catgut. A long thin tube was put down to the incision in the ureter and brought out at the lower end of the suprapubic wound. The bladder was then sutured completely with catgut and the suprapubic wound closed up to the drainage-tube. A soft rubber catheter was tied in for 48 hours, at the end of which both catheter and drainage-tube were removed. Except that a few drops of urine leaked from the ureter on the third day, recovery was uneventful and the wound healed by first intention.

Remarks by Mr. MORLEY.—The bladder was opened by a median suprapubic incision in this case because it was suspected that the stone would be found encysted close to the ureteric orifice and would be most easily removed by the transvesical route. This method did not prove feasible. The excellent access to the pelvic ureter obtained by extraperitoneal dissection through the same median incision suggests that in similar cases the median incision might be used and the stone removed from the ureter, after pushing it back to the pelvic brim, without opening the bladder. The recognised methods for removal of stones from the lower end of the male ureter are: (1) Extraperitoneal (or combined intra- and extra-peritoneal, a finger being inserted into the peritoneum to control the stone) through an oblique incision in the loin; (2) transperitoneal; (3) transvesical; and (4) injection of oil by the ureteric catheter followed if necessary by removal with the operating cystoscope. The first method gives good access but involves more damage to the belly wall than the median incision; the second is less satisfactory on account of the danger of leaking of urine into the peritoneum; the third is only possible where the stone is encysted close to the ureteric orifice; and the fourth can only be done with very small stones that are visible on cystoscopic examination of the ureteric meatus. One important proviso must be made in recommending the median incision. Complete muscular relaxation must be obtained, and this can only be done by the use of spinal anæsthesia. In this case the ease with which the flaccid rectus could be retracted to the side was most remarkable.

Manchester.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

SECTION OF OBSTETRICS AND GYNÆCOLOGY.

The Need of Research in Ante-natal Pathology.

A MEETING of this section was held on April 2nd, Dr. W. S. A. GRIFFITH being in the chair.

A discussion was opened by Dr. AMAND ROUTH on this subject, who said that progress in ante-natal pathology since Sir William Priestley's Lumleian lectures on the Pathology of Intra-uterine Death in 1887[1] had been small, except as regards syphilis, which was now better understood because of recent discoveries. The present ante-natal mortality in England and Wales, according to his estimate of 2·2 stillbirths and 8·8 abortions to 100 live births, was about 100,000 annually. He pointed out the essential difference in the physiological and pathological activity of the embryo and the fœtus. Diseases affecting the former caused anomalies of structure, while the same diseases produced abnormalities in the latter by interference with function. In either case ante-natal death might follow, leading to abortion or premature labour. Dr. Routh next discussed some of the more general causes of ante-natal death together with the problems dependent thereon. He dwelt in particular upon ante-natal syphilis and ante-natal tuberculosis. With regard to syphilis, he described the clinical evidences of this disease in the fœtus and placenta. According to a number of observers the spirochæta pallida was present in from 70 to 80 per cent. of macerated stillborn fœtuses. With regard to tuberculosis, since the tubercle bacillus had not yet been demonstrated in the early embryo, it was considered that the ovum was rarely infected by this agent, and that placental tuberculosis also was rare. Dr. Routh then discussed paternal infection of the ovum and the question whether tuberculosis led to structural anomalies in the early ovum. He emphasised the divergence of existing views upon the whole subject of ante-natal pathology, the absence of exact knowledge, and the need for research in all directions. Compulsory registration of stillbirths and confidential notification of causes of death in particular were necessary for the improvement of statistics.

Dr. J. W. BALLANTYNE (whose paper was read by Dr. T. W. EDEN) said that he had in 1887 published his first paper on general dropsy of the fœtus, and in 1899 had lectured on ante-natal pathology and teratology in the University of Edinburgh. Since then he had been led to investigate morbid states of gestation as they affected the mother. He considered that there were two large regions to be explored. Firstly, the physiology and pathology of pregnancy such as were met with in the pre-maternity wards of any hospital. Secondly, there was that of the physiology and pathology of each of the three periods of ante-natal life so far as the new being was concerned, the periods of germinal, embryonic, and fœtal activity. Lastly, there was the consideration of the placenta (or decidua) both in health and disease. Without a serious study of ante-natal pathology there could be no marked improvement in race health, and race health was the watchword of the present day; eugenics was attempting to solve it, but eugenics without obstetrics and ante-natal pathology and hygiene would have but small success.

Dr. F. W. MOTT said that he had for years made a personal investigation of the family history of a number of cases of juvenile general paralysis with a view to showing that this disease is invariably caused by syphilis. Dr. Mott found that both sexes are affected in equal proportion, unlike that of acquired syphilis in which males exceed females in the proportion of 4 or 5 to 1. In inquiring into family histories a number of interesting facts were obtained which related to ante-natal death, and which were considered under different groups. The usual history obtained was that the mother, after one or more miscarriages followed by abortions and stillbirths, had one or more children who generally died in early infancy from convulsions, hydrocephalus, or meningitis; later a child

[1] THE LANCET, vol. i., 1887, pp. 759, 814, and 865.

survived, and at puberty or early adolescence developed general paralysis. The histories of 34 syphilitic mothers gave 175 conceptions. These were made up of 104 premature births or deaths in early infancy, 41 diseased in some serious form or other, 30 were apparently healthy, but many of these may have suffered later, and certainly a considerable percentage of these apparently healthy children would have given a positive Wassermann reaction. In four instances the mothers were affected after marriage and after each had given birth to healthy children. It was of interest to note what followed in respect to conceptions before and after the mothers had been infected. Taken together there were 15 conceptions before infection resulting in the birth and rearing of 15 healthy children. After infection there were 23 conceptions; of these, 13 were abortions, stillbirths, and children dying in early infancy; of the remaining 9 there were 5 seriously diseased, and there was no absolute proof that the remaining 4 were healthy. Next came the question of spermatic infection and transmission of the disease to the offspring without infection of the mother. Here Dr. Mott agreed with Neisser that the mother of a syphilitic child was herself syphilitic, although she might not show signs in such cases because the disease was latent. It had been pointed out by Plaut regarding the Wassermann reaction in paralytic men and women and their offspring that 37 per cent. of the spouses of such paralytic men and paralytic women gave a positive Wassermann reaction. Finally, Dr. Mott referred to the examination of a series of still-born and premature-born fœtuses received from the Shoreditch Infirmary; out of 22 cases examined spirochætæ were found in 11. The author referred to the method he used of demonstrating the spirochætæ in the brains of persons dying from general paralysis and of syphilitic fœtuses, showing the organism to be the same in the two conditions.

Dr. DARWALL SMITH gave the results of an investigation he had made on the influence of the nutrition of the mother on the infant and on her labour and puerperium. His chief conclusions were that a state of bad nutrition of the mother at the time of labour increased the percentage of dead births and premature births, also the post-natal infantile mortality. It decreased the average weight of the full-term child at birth. On the other hand, a state of good nutrition of the mother increased the supply of milk and also the average weight of the child at birth.

Dr. LEITH MURRAY (Liverpool) confined his remarks mainly to the bearings of pregnancy to immunity production. He contended that the main part of the research to be done on ante-natal pathology, particularly that on the immunology of pregnancy, was work for experts, more especially in serology and biochemistry, and that the National Insurance Research Fund could help here.

Dr. ERIC PRITCHARD spoke on the question of tuberculous disease in the newly born infant, and pointed out how difficult this was to demonstrate, and must be still more so in the unborn baby.

Dr. CAMAC WILKINSON said that he had definitely taught for the past 15 years that the father could not convey infection to the ovum unless the mother was first infected. He contended that the infection of syphilis was similar to that of tuberculosis, and there appeared to him irresistible evidence that tuberculosis could not be conveyed by the paternal element.

Dr. EARDLEY HOLLAND and Dr. A. W. RUSSELL also spoke.

Dr. ROUTH, in reply, alluded to Dr. Newsholme's welcome statement that the Local Government Board had been so impressed with the value of this research that they had been able to make a grant to Dr. Holland and Dr. P. B. Ridge to enable them to embark upon the necessary laboratory research. Dr. A. W. Russell (Glasgow) had also stated that a layman had given £3000 to equip a laboratory in the Glasgow Maternity Hospital. The section also had heard the suggestion of Dr. Murray that the National Insurance Research Fund, which apparently amounted to about £57,000 a year, and which under Lord Moulton's chairmanship had already done so much for research in tuberculosis, should be used also for research in ante-natal pathology. He hoped this might be practicable, and this discussion would help forward any such scheme. As regarded the scientific results of the discussion, two or three things were evident. First, that very little was certain as regarded ante-natal disease, either with regard to relative incidence, source or method of infection, prophylaxis, or treatment. Taking syphilis, for instance, the very existence of paternal infection of the ovum was denied by such an authority as Dr. Mott. Dr. Routh saw no particular reason why paternal infection and fertilisation of the ovum should not be simultaneous, nor did he see why the fertilised ovum freshly implanted upon the uterine mucosa could not be easily infected by the male parent's infected semen. Tuberculosis, again, could not be as yet proved to infect the embryo or fœtus in utero except in relatively a few cases, but he thought it very likely that tubercle did infect the early embryo, and if so its effect upon the delicate cellular three-layered blastoderm would be considerable, and could easily cause dystrophic abnormalities which would lead to early and perhaps unrecognisable abortions. Research must decide these points, as well as the curious fact that in syphilis spirochætæ were but rarely found in the early embryo, and were yet found in abundance in the fœtus. He hoped the discussion would greatly stimulate extended research.

MANCHESTER MEDICAL SOCIETY.

The Bacteriology of Milk in Relation to Infant Feeding and to the Treatment of Alimentary Disease.

A MEETING of this society was held on April 1st, Dr. ARCHIBALD DONALD being in the chair.

Dr. RALPH VINCENT opened a discussion on the Bacteriology of Milk in Relation to Infant Feeding and to the Treatment of Alimentary Disease. He grouped the organisms according to the conditions determining their growth in milk. 1. Bacteria producing lactic acid but not producing gas. This group was represented by the streptococcus lacticus and the bacillus lacticus. The streptococcus lacticus was the typical organism growing in pure milk at 38° C. At a later stage, when the acidity had become too great for the streptococcus, the bacillus lacticus appeared, for this organism was exceptionally tolerant of acid. 2. Bacteria producing lactic acid, carbon dioxide, and alcohol. This group embraced the whole of the colon organisms, and included the bacillus acidi lactici (Hueppe), bacterium acidi lactici (Esten), bacillus lactis aerogenes (Escherich), and the bacillus coli communis. When pure milk was incubated the growth of the organisms belonging to this group was inhibited by the growth of the organisms belonging to the first group. When milk, however, was grossly contaminated by colon organisms these might acquire dominance, and in such cases the curdled milk showed evidence of gas production. 3. Bacteria growing in "pasteurised" milk—that is, milk that had been subjected to a temperature between 65° and 100° C. The bacillus putrificus and the bacillus lactis aerogenes were examples of this group, and their products were of a highly irritant and dangerous character. 4. Bacteria growing in milk after it had been raised to 100° C. owing to the fact that their spores had not been destroyed. These organisms were found in milk that had been boiled or "sterilised" and in condensed milk. The group embraced a large number of organisms, the chief representatives being the bacillus subtilis, the bacillus mesentericus, and the bacillus mesentericus vulgatus. When they developed in the intestines extremely powerful poisons of an alkaloidal character were created, and the adsorption of these poisons produced profound coma and death. The contents of the small intestine were normally acid owing to the formation of lactic acid from lactose by the lactic bacteria. Were it not for this acid condition putrefactive processes would occur. In the soil the conditions were reversed, for putrefaction was the essential process by means of which dead organic matter was decomposed and rendered available for the vegetable kingdom. The lecturer discussed the methods of bacteriological examinations of intestinal dejecta employed at the Infants Hospital, and drew especial attention to the pathological conditions induced by improper diet. When the infant was deprived of the lactic organisms naturally present in milk the colon organisms became proteolytic and grave illness resulted. All his observations had gone to show the extreme importance of the milk for infants being given in its raw condition. He believed that the improper feeding with cooked food encouraged the development of tuberculosis, and that the boiling of milk played an important part in the production of diseased conditions in infancy and childhood. Dr. Vincent concluded with a

lantern demonstration of numerous photomicrographs illustrating the organisms found in various pathological conditions of the alimentary tract.

Dr. NATHAN RAW said that he did not think it was sufficiently well known that pure milk was sterile, and that the lactic organisms were non-pathogenic. Dr. Vincent's remarks applied to the conditions obtaining at the Infants Hospital, which enjoyed rather exceptional benefits, but in such towns as Liverpool and Manchester it was surely safer to pasteurise the milk before giving it to children. His own observations had brought him to the conclusion that there was a very real danger in such towns of infants contracting tuberculous disease from untreated milk; he would like to ask Dr. Vincent if he did not think that bovine tubercle bacilli were capable of infecting children.

Dr. C. P. LAPAGE said that he would like to have heard Dr. Vincent's opinion on dried milk. He had come to the conclusion that in slum districts it was safer for the milk to be pasteurised than to be given to infants untreated.

Dr. VINCENT, in his reply, said that he was astonished to hear Dr. Raw speak of a "sterile" milk. Neither human milk nor cow's milk was sterile. Collected with the greatest care both milks after about eight hours' incubation at blood temperature normally showed a profuse growth of the streptococcus lacticus. The bacillus aerogenes capsulatus could always be found in cow's milk provided a sufficient quantity of cow's milk was taken. He did not think that the "pasteurisation" recommended by Dr. Raw could be relied upon to destroy tubercle bacilli. He based his statement in regard to cooked milk and tuberculosis simply upon practical experience, not only of himself but of many others. He could not establish any relationship between the consumption of raw milk and the incidence of tuberculosis. On the contrary, he found that children fed on boiled or condensed milk were much more prone to the disease, especiallly in its more serious forms. He found it difficult to understand the attitude generally adopted by medical men who favoured the boiling of milk, for they were uniformly silent on the subject of boiling the butter, a concentrated milk product always prepared from raw milk. Practically all the infants attending the out-patient department of the Infants Hospital were fed on raw milk which the mothers obtained from the ordinary milk shops. The infants did extraordinarily well, and the work there afforded no justification for the advocacy of boiled milk. He was inclined to agree with Dr. Lapage with regard to dried milk. If a child had to be fed on a cooked food, then dried milk was better than boiled milk.

UNITED SERVICES MEDICAL SOCIETY.—A meeting of this society was held at the Royal Army Medical College on April 9th, Colonel Bruce M. Skinner, M.V.O., A.M.S., the President, being in the chair. Major Josiah Oldfield, R.A.M.C. (T.) read a paper entitled "The Scope of the Field Ambulance as a Training School." He said that the modern tendency in business enterprise was towards single control and single portal training with subsequent specialisation in place of sporadic, varied, and uncorrelated methods. He submitted that the methods which had secured success by promoting harmony, economy, and capacity for expansion in modern great businesses were worthy of consideration if as perfect an organisation as possible was wanted for the medical administration of the Territorial Force. In order to secure harmonious working and complete understanding by every officer and man of his duties and responsibilities, and to provide thorough and standardised training, the field ambulance should be the one training school for the officers and men responsible for the health of the troops. At present the regimental medical officer was inadequately trained and was not required to attend camp at all—in fact, if the battalion to which he was attached was at full strength he was only allowed to go to camp every alternate year, whereas the field ambulance medical officer was required to attend camp once in every three years, and pressure was brought to bear on him to make him attend every second year. The regimental medical officer was too isolated, whereas the field ambulance medical officer was not so. The speaker emphasised this point because he thought that camp was the one absolutely essential method of training officers as well as men for their duties in peace and war. He laid stress on the standardisation of working, and contended that the only way that this could be obtained was by having the field ambulance as the one school for training. After general training then specialisation could be taken up in some particular branch. At present the position of the regimental medical officer was not unmistakably clear with regard to the question of command, and friction might arise. The problem of command would be solved if it were the duty of the officer commanding the field ambulance to post an officer to each battalion in camp. Such officer would be responsible to his officer commanding for the due discharge of his duties; he would mess with his field ambulance, and would be an integral part of the unit. By means of this constant interchange of duties every officer would have a knowledge of working of the whole medical machinery with the Territorial Force.

ÆSCULAPIAN SOCIETY.—A meeting of this society was held on April 17th, Dr. W. Langdon Brown, a Vice-President, being in the chair.—Mr. R. M. Vick showed: 1. A plump baby of 5 months with a supposed Palsy of the Right Arm. Periostitis of the right humerus and other bones was detected by X rays. It was the thirteenth child. There had been iritis in previous children, miscarriages, and early deaths. The Wassermann reaction was positive. The child was rapidly improving under the use of mercurial ointment. 2. A married woman of 40, who had had pain in the left breast for a year. There was a large hard mass in the upper and outer breast quadrant; the skin was adherent to it, as also the tissues below. The axillary and supraclavicular glands were involved.—Dr. W. Langdon Brown showed: 1. A man of 58 with marked Anæmia and Anorexia; he had vomited in September, 1913. There was some leucopænia; no tumour could be felt. The test meal showed an absence of free hydrochloric acid, the X rays some irregularity of the stomach's outline, and the benzidine-peroxide test of the stools blood. From these facts malignant disease of the stomach was diagnosed. 2. A man of 44, the subject of glycosuria for four years and thirst and wasting for three years. He was on von Noorden's diet, was benefited, but not free from glycosuria. His pupils were unequal and knee-jerks absent. 3. A woman of 47 the subject of glycosuria for seven years. Similar diet removed the sugar from her urine on some days. Dr. Brown also read notes of a case of a young girl admitted for Multiple Arthritis, who developed peri- and endo-carditis, pneumonia, blood in the stools, incontinence of urine and fæces, and oscillating fever. After sensitised vaccines were administered she rapidly improved. Recovery was uneventful. She left hospital with only an apical cardiac bruit.—Dr. Leonard Williams showed a woman of 51, with a healthy family, who complained of dorsal backache. The bismuth feed was seen to reach a dark patch at the level of the aortic arch readily, then to go up and down. Aneurysm was thought less probable than a neoplasm through the breadth of the hindrance and the absence of usual aneurysmal signs.—Mr. Henry Curtis showed a specimen of Primary Squamous Epithelioma of the end of the nose removed with three-quarters of an inch of surrounding skin. A thorough removal of salivary, submaxillary, and lymphatic glands and cervical lymphatic glands was effected and of the skin in the lymph track by cutting down to the jaw. Four and a half months later the man is still well.

DEVON AND EXETER MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held at the Royal Devon and Exeter Hospital on April 3rd, Mr. Ransom Pickard, the President, being in the chair.—Mr. F. W. Langridge read a paper to open a discussion on What is Bright's Disease? He initiated his remarks by quoting from various standard books on medicine, and showing the confusion which existed in the nosology of renal affections. He then dwelt for some length on the pathological changes and the concomitant symptoms relative to the large white, small white, and granular kidney respectively, and said that whatever opinion might be held when the marked differences, pathological and clinical, were considered between the desquamative and the cirrhotic types of nephritis it was hard to disagree with Rose Bradford when he refused to classify them together under the one heading of "Bright's disease." The amyloid kidney, which was also included by some authors, had little clinically or pathologically to warrant its classification under Bright's disease. In these circumstances, where there

was so much uncertainty of opinion, how was the unfortunate general practitioner, or the still more unfortunate candidate for examination, to state an opinion? Mr. Langridge considered that a time had arrived when except in conversation with patients and their friends the term "Bright's disease" should be abandoned as being inaccurate and therefore unscientific. He suggested in substitution a nomenclature based on the pathological finding—viz., the acute tubal nephritis, and the two varieties of chronic nephritis, parenchymatous or tubal, the small white kidney being considered with the granular form, as clinically and in treatment they were inseparable. As regards mixed forms where it was impossible to relegate to any of these classes, Mr. Langridge bade those present to follow the advice of one of Mark Twain's celebrities who said, "When in doubt speak the truth."—In the discussion which followed, Dr. Henry Davy said that at one time every form of albuminuria was considered as Bright's disease; with increased knowledge had come more differentiation. In the future he considered that a further classification would be made based upon the bacteriological finding. Scarlet fever played an important part in the etiology. It might yet be found that the small cirrhotic kidney was the outcome of bacterial invasion. He quoted a case of albuminuria where the cause had undoubtedly been a short streptococcus and where urotropine had proved beneficial. Again, amyloid disease was of bacterial origin.—Dr. William Gordon said that the subject of the paper opened up two lines of thought: (1) nomenclature and (2) diagnosis. Mr. Langridge had concerned himself chiefly with the nomenclature, whilst Dr. Davy had followed both lines. Speaking for himself, Dr. Gordon had discarded the name Bright's disease, but in his earliest associations with medicine he had understood it to mean a diffuse non-suppurative disease of the kidney. Dr. Gordon then discussed chronic renal disease and the possibility of an inflammatory origin as suggested by gout, lead and alcohol being undoubted causes. He considered, however, that it was an academic question best left to the pathologists. The speaker then dwelt on those cases of albuminuria occurring at 40 and upwards and remaining without any apparent evil influence on the life of the patient. Should such be labelled Bright's disease? He offered an affection at one pole only of one kidney as a possible solution of the symptoms manifested in these cases. He advised that the term Bright's disease should not be used unless asked for, and pointed to the field of investigation open in the matter of permanent and transient albuminuria.—The President said that Bright had included all cases of albuminuria under his own nomenclature at a discussion. Speaking from his own experience at the Eye Infirmary, he (the President) had noted that the retinal changes often appeared before the albuminuria. In pregnancy the albumin might never appear although retinal changes were present. With regard to the germ theory of nephritis, even if they accepted it they must still "go back further" to complete the pathology. With regard to arterio-sclerotic cases, he had found changes in the retinal veins as complete as in the arteries. He had found small patches in the region of the yellow spot which were distinctive of Bright's disease as opposed to atheroma.—Dr. R. V. Solly excluded cases of recognised bacterial origin from the category of Bright's disease, and he pointed out the fallacy of interpreting a bacilluria as necessarily meaning the presence of renal disease simply because excretion from the kidney had been proved. He then discussed the experiments of Rose Bradford, and considered that the internal secretion theory had little for its support. He considered that Bright's disease was due to a toxin produced under various conditions, and that they must go further back than the bacteria themselves.—Dr. Raglan Thomas alluded to cases where hæmaturia and finally albumin were directly related to the passage of crystals of uric acid.—Mr. A. C. Roper said that formerly the presence of albuminuric retinitis was a death warrant to the patient, but now it was found that 50 per cent. of a certain class recover. In illustration he read notes on a case demanding a severe surgical operation for fibromyoma where the patient had previously been observed at the Eye Infirmary to be suffering from albuminuria and retinitis. She had stood operation well and was making an excellent recovery.—Dr. F. A. Roper discussed the question of transient albuminuria and its control by calcium lactate.—Mr. Langridge replied.

MANCHESTER PATHOLOGICAL SOCIETY.—A meeting of this society was held on April 8th, Dr. A. Brown presiding.—Dr. C. P. Lapage read a paper on the Clinical Pathology of the Cerebro-spinal Fluid in Meningitis in Children. He described the chemical, physical, and microscopical findings in the different forms of meningitis, laying great emphasis on the value of performing lumbar puncture early and of using specific serum as soon as possible. More than 70 per cent. of his cases were tuberculous. He described the technique of mounting the film which usually formed in this variety of meningitis. If the cerebro-spinal fluid from a case that was obviously one of meningitis remained clear and retained its power of reducing Fehling's solution the disease was probably tuberculous.—Dr. D. E. Core read a paper on Subarachnoid Hæmorrhage. He shortly discussed the anatomy of the arachnoid mater, pointing out the structural differences that existed in this membrane: (1) at the base; and (2) on the lateral aspects of the cerebral hemispheres. The morbid anatomy of diffuse subarachnoid hæmorrhage was dealt with, the appearances varying according as to whether the bleeding began at the base of the brain or upon the lateral convexity. The importance of syphilis as a causal agency in the production of the condition was mentioned, and the absence of any traumatic history in the cases he had personally observed. The symptomatology—profound coma, epileptiform tremors, and final flaccid paralysis in the limbs first convulsed—was described. The rapidly fatal nature of the condition was referred to.—Dr. D. H. Paul read a paper on Disseminated Softenings in the Spinal Cord in a case of Pancreatic Cancer. These small foci of softening were not commonly found in cords taken from cancer cases—they had been found in other diseases of a toxic nature and in caisson disease. If sufficient time elapsed before death they caused secondary degeneration and were characterised by marked swelling of the axis-cylinders, absence of inflammatory reaction, and neuroglial proliferation, but the vessels showed a high degree of hyaline degeneration. Dr. Paul did not regard these foci as myelitic, but rather of the nature of ischæmic softenings.—Mr. R. Ollerenshaw read a short paper on Sacro-coccygeal Cysts.

LIVERPOOL MEDICAL INSTITUTION.—A meeting of this society was held on April 16th, Dr. E. W. Hope, the President, being in the chair.—Dr. W. Permewan read notes of a case of Thrombosis of the Lateral Sinus following acute suppurative otitis, with remarks on ligature of the internal jugular vein. He described the clinical history of the case and the surgical and therapeutic treatment adopted. The important points were ligature of the vein and clearing out the clot. A phylacogen had been used with, he thought, beneficial effect.—Mr. Colin G. Campbell related a somewhat similar case.—Mr. Hugh E. Jones agreed to removal of the clot, but he was inclined in acute conditions to do a small rather than a large operation, and suggested that infective processes frequently limited themselves.—Dr. W. Sanderson spoke of his result after ligature of the vein.—Dr. C. A. Adair Dighton quoted some statistics and said he had not lost a case since he began to ligature the vein.—Mr. G. C. E. Simpson read a note upon Some Operations for Femoral Hernia and related nine cases upon which he had operated by the inguinal route. The advantages were several: high access to the neck of the sac, free exposure of the fasciæ round the ring, and the excellent closure of the ring obtainable. Four of the cases were strangulated; in other two of the series there was a hernia of the bladder.—Mr. R. W. Murray, as an advocate of the saccular theory of hernia, did not attach much importance to suture of fasciæ, but considered the access to the neck of the sac by this route an advantage.—Mr. T. C. Litler Jones said that the sac did not always disappear if left, as he had found a lipomatous mass some years after operation.—Mr. T. R. W. Armour always used this route for two main reasons: that the whole sac could be removed and the top instead of the bottom end of the crural canal could be closed.—Dr. R. W. MacKenna read a medico-literary causerie upon Some Reflections on the Act of Death.—The President, Dr. J. R. Logan, and Dr. E. T. Davies also spoke, the last named giving a personal experience.

Reviews and Notices of Books.

Ulcer of the Stomach.

By CHARLES BOLTON, M.D., D.Sc. Lond., F.R.C.P. Lond., Director of Pathological Studies and Research, and Lecturer in General Pathology in University College Hospital Medical School; Physician (with Charge of Out-patients) to University College Hospital. London: Edward Arnold. 1913. Pp. 396. Price 15*s.* net.

ULCER of the stomach is a common affection, and although its symptomatology and treatment are well recognised and understood the etiology and pathology have given rise to much discussion, and there is still a want of unanimity in regard to those points. In the work now before us an instructive account is given of the general pathology of the disease, special attention is drawn to experimental research, and a considerable amount of valuable original investigation is recorded. We are entirely in accord with Dr. Bolton's views as to the importance of blending a study of morbid anatomy and clinical medicine with experimental pathology. It is true, as he remarks, that certain pathological problems can be studied exclusively in the laboratory, but these are merely parts of the whole, and eventually must be correlated with the facts obtained through a study of the patient.

In discussing the pathology of gastric ulcer three conditions are described—the acute ulcer, the transitional forms, and the chronic ulcer—and the characteristic features of each are pointed out. A number of excellent reproductions of photographs of morbid specimens adds to the value of the letter-press. The remarks on the formation of acute gastric ulcer demand careful attention. Amongst the causes which may give rise to the initial lesion that precedes the formation of the acute ulcer, bacterial infection of the body is said to be a frequent factor. The infection may be general, and either acute or chronic, or it may be a purely local one. The organism causing the lesion may be a specific organism of the disease, or it may be secondarily introduced. Dr. Bolton proceeds to remark that although it has not yet been demonstrated in the human subject that a poison of metabolic origin is capable of bringing about necrosis of the gastric mucous membrane, his experiments with gastrotoxin have demonstrated the possibility of such an occurrence. Gastrotoxin belongs to a group of immune substances known as cytotoxins, and he showed in 1904 that such a substance could be produced by immunising an animal with the gastric cells of another animal. He further says that the initial change in the formation of the acute ulcer is neither thrombosis, embolism, nor hæmorrhage, and that the actual necrosis is caused by the gastric juice acting upon a cell in some way changed by the poison, which has been brought to it by the blood, so that it is rendered susceptible to the action of the gastric juice; the process is, consequently, one of self-digestion. He therefore considers the principle established that a poison of metabolic origin which circulates in the blood may be capable of initiating self-digestion, and the actual death of the cell is not a necessary antecedent to such digestion.

The observations on hæmorrhage into the mucous membrane are also interesting. The most important and the commonest cause Dr. Bolton believes to be bacterial invasion, which may bring about the event in one of two ways—either by a direct action of the bacterial poisons upon the capillary wall, or by giving rise to vascular occlusion and hæmorrhagic infarction. In the latter case necrosis of the tissue is always present; in the former case necrosis may or may not be present.

Evidence is then quoted to support the view that the chronic gastric ulcer is derived from the acute variety, and the objections which have been advanced against this opinion are criticised, but Dr. Bolton is strongly of opinion that the chronic ulcer does arise as an acute lesion. The symptomatology of acute and chronic ulcers is well and lucidly given, and the diagnosis and prognosis of these affections are discussed at length. The value of hæmatemesis as a diagnostic symptom of gastric ulcer is carefully considered, for during recent years much discussion has centred round this symptom in the differential diagnosis of gastric ulcer. As is well known, profuse hæmorrhage may occur from the mucous membrane of the stomach apart from gastric ulceration, and the situations in which this may occur and the condition known as "gastrostaxis" are duly commented on. The remarks on the clinical investigation of hæmatemesis are also worthy of note.

In the section of the work dealing with treatment the methods which should be adopted in cases of acute gastric ulcer are first described. Rectal feeding is, of course, fully discussed, but Dr. Bolton is strongly of opinion that hæmorrhage from the stomach is practically the only complication of gastric ulcer which necessitates this method of feeding, and also that mouth feeding should be started at the earliest possible moment. In describing the treatment of chronic gastric ulcer he first expresses his own views, and remarks that in this form of the disease rectal feeding is very rarely needed apart from the occurrence of hæmorrhage. We doubt, however, whether the majority of physicians would concur in this opinion. He attaches great value to the administration of alkalies.

We have perused this volume with much interest, and can recommend it as a valuable and instructive treatise.

A Handbook of Practical Treatment by Many Writers.

Edited by JOHN H. MUSSER, M.D., LL.D., Professor of Clinical Medicine in the University of Pennsylvania, Philadelphia, and A. O. J. KELLY, A.M., M.D., late Assistant Professor of Medicine in the University of Pennsylvania, Philadelphia. Vol. III. London and Philadelphia: W. B. Saunders Company. Pp. 1095. Price 75*s.* per set of 3 vols.

THE third and concluding volume of this important work is concerned with the treatment of constitutional diseases such as diabetes, obesity, scurvy, gout, arthritis deformans, and diseases of the respiratory, digestive, urinary, and nervous systems. There are also short articles on diseases of the muscles and on mental disorders.

The treatment of diabetes mellitus is discussed in a scientific and practical article by Dr. Theodore C. Janeway, of New York, who puts as the chief aims of treatment the improvement of the carbohydrate tolerance and the prevention of hyperglycæmia. At the same time he recognises the dangers of acidosis, and points out that in severe cases the need for combating acidosis may be paramount and the prevention of hyperglycæmia subordinate. He also emphasises the

importance of maintaining nutrition. Dr. Janeway describes a practical method of determining carbohydrate tolerance. For purposes of treatment the cases are divided into mild, severe, and intermediate, and the measures discussed comprise diet, hygiene and exercise, treatment at health resorts, and drugs. Considerations of diet are dealt with on scientific principles, and some valuable diet tables are given. Owing to the facts that patients with severe diabetes manufacture sugar from protein and that they are usually more intolerant of the carbohydrate so derived than of that taken preformed in the diet, Dr. Janeway lays great stress upon the regulation of the protein intake in these cases. Dr. Thomas B. Futcher, in discussing diabetes insipidus, divides the cases into three groups—viz., those in which there is an organic basis in the central nervous system, very often syphilitic; those in which a functional neurosis coexists; and those which he describes as the renal type. Dr. Albion Walter Hewlett contributes a series of short articles on obesity, inanition, scurvy and infantile scurvy, rickets and osteomalacia. That devoted to obesity gives an interesting account of the principles of treatment of that condition, together with some useful diet lists.

Dr. Futcher contributes articles on gout, lithæmia, and chronic articular rheumatism. Diseases of the respiratory system are considered at length, Dr. Charles W. Richardson contributing a practical article on the treatment of diseases of the nose and throat, while Dr. John H. Musser has dealt with diseases of the bronchial tubes, asthma, hay fever, and pulmonary emphysema. Dr. James E. Talley discusses the treatment of hæmoptysis, pulmonary œdema, and other disorders of the circulation in the lungs, such as embolism and congestion. In every instance the treatment is discussed critically, and valuable practical suggestions are often given. We may mention the article on the treatment of hæmoptysis as an especially interesting and useful contribution to the subject. The treatment of tracheal and bronchial obstructions is described by Dr. Chevalier Jackson, that of broncho-pneumonia, pneumonoconiosis, abscess and gangrene of the lung by Dr. Henry Jackson. Other articles deal with speech defects, diseases of the pleura, and the surgery of infectious diseases of the lung and pleura. In the last of these, which was written by Dr. Samuel Robinson, an interesting account of the use of artificial pneumothorax as a means of treatment is given. A noteworthy article is that by Dr. Isaac A. Abt on diseases of the respiratory system in children.

Diseases of the digestive system are dealt with in an equally practical and instructive manner in a series of important articles, among which we may mention that on diseases of the stomach by Dr. Bertram W. Sippy. A useful summary of the indications for surgical treatment in cases of gastric ulcer is given, as well as detailed instructions in regard to the dietetic and medicinal treatment of that condition. The surgery of the œsophagus is described by Dr. Charles H. Mayo, that of the stomach and duodenum by Dr. William J. Mayo, while the surgery of the liver and gall bladder is discussed by Dr. Maynard Ladd. Diseases of the pancreas are considered by Dr. James M. Anders, and Sir Berkeley G. A. Moynihan contributes a note on the special circumstances in operations upon the pancreas.

The treatment of diseases of the urinary system is dealt with from the medical point of view by the late Dr. Egbert Le Fevre, and from the surgical standpoint by Dr. Guy L. Hunner.

The treatment of diseases of the nervous system is considered by Dr. William G. Spiller, Dr. Charles H. Frazier, Dr. E. W. Taylor, Dr. John Homans, Dr. F. X. Dercum, and Dr. C. H. Moffitt. Dr. Dercum contributes a useful article upon the treatment of the co-called functional nervous disorders. Dr. Moffitt discusses vaso-motor and trophic disorders, and also diseases of the muscles.

The concluding article deals with the treatment of diseases of the mind, and is written by Dr. James Hendrie Lloyd.

This volume worthily maintains the standard set by its predecessors, and the system of treatment as a whole is one we can commend to our readers as a sound practical work of reference.

A Synopsis of Surgery.

By ERNEST W. HEY GROVES, M.S. Lond., F.R.C.S. Eng., Surgeon to the Bristol General Hospital, Lecturer on Surgery at Bristol University. Fourth edition, revised and illustrated. Bristol: John Wright and Sons; London: Simpkin, Marshall, Hamilton, Kent, and Co. 1914. Pp. 599. Price 9s. 6d.

THIS synopsis of surgery has had a wide sale, which has necessitated the issue of frequent editions, and it deserves thoroughly all the success it has attained. In this edition the pathological and bacteriological sections have been revised and in great part rewritten by Mr. George Scott Williamson, and they may be taken to represent the latest pathology. There have been many small but important changes required by the progress of surgery, but the plan of the book remains unaltered, and we may repeat what we have said of it before, that if it is used wisely as an adjunct to the larger works it should afford invaluable assistance to the student in the preparation for examination.

Handbuch der Gesamten Therapie.

Herausgegeben von F. PENZOLDT und R. STINTZING. To be completed in seven volumes with about 900 illustrations. Lieferungen 1 to 10. Vol. I. With 35 illustrations and 1 curve in the text. Jena: G. Fischer. 1913-1914. Pp. 986. Price complete, paper, 120 marks; bound, 141 marks.

THE fifth edition of Penzoldt and Stintzing's great Handbook of Therapy is now in process of appearance, and bids fair to be larger and more complete than any of its predecessors or rivals. At the present time only the first of its seven volumes has been published in full, but parts of other volumes have been issued, and the whole work is to be out by the end of the current year. The first edition was printed only 19 years ago; the fifth is to be the work of 85 contributors, all specialists in the subjects about which they write; most are Germans, a few are Austrians or Scandinavians. This handbook, as is well known, aims at thoroughness and completeness, and covers all departments of internal medicine. The first volume deals with the treatment of the infectious diseases, poisonings, disorders of metabolism, and diseases of the blood and of the ductless glands. The second volume will contain the treatment of the diseases of the digestive organs; the third volume that of diseases of the lungs, the circulatory organs, and the genito-urinary tract (excluding venereal diseases). In the fourth volume the treatment of nervous disorders and insanity will be discussed;

in the fifth, diseases of the locomotory apparatus, venereal disease, diseases of the skin and eyes, and treatment with various rays and emanations. The sixth volume will be given to surgical treatment and ear disease; the seventh to obstetrics and gynæcology. It is enough to say that the first volume, admirably got up and furnished with a good index, fully maintains the high standard of excellence set by the previous editions of this well-known handbook. Most of it is well written and to the point, and but rarely does it show the degeneration of thoroughness into longwindedness that not infrequently disfigures, or seems in British eyes to disfigure, the larger German text-books. The new edition of "Penzoldt and Stintzing" should be on the shelves of every medical library, and may be cordially recommended to the attention of all medical practitioners.

The Operating-room and the Patient: a Manual of Pre- and Post-operative Treatment.

By RUSSELL S. FOWLER, M.D., Chief Surgeon, First Division, German Hospital, New York, &c. Third edition, rewritten and enlarged. London and Philadelphia: W. B. Saunders Company. 1913. Pp. 611. Price 15*s.* net.

ON two previous occasions we have spoken favourably of the earlier issues of this work, and this edition has the good qualities of its predecessors with some additional merits of its own. It is a work of great value for all those who have to organise the operative service of an institution or to carry on the work when it has once started. It abounds in valuable details as to the management of a patient both before and after an operation. In addition to the general chapters relating to operations generally, there are special sections detailing the treatment connected with operations on particular parts of the body. We quote the sentence in which the author sums up his teaching: "Roughly, the underlying principles of successful surgical treatment may be summarised as follows: careful anæsthesia, exact hæmostasis, asepsis, rest of the injured part, use of the rest of the body, feeding advanced to the normal as the anæsthetic-weakened stomach can care for it, and the following of the general rules of hygiene." This edition is much larger than the second, and contains many more illustrations.

LIBRARY TABLE.

Materia Medica Notes. By JAMES A. WHITLA, L.R.C.P. & S. Edin., L.P.S.I. Edinburgh: E. and S. Livingstone. 1913. Pp. 155. Price 2*s.* 6*d.*—The author is careful to point out in his introduction that this little volume is not intended to rank as a text-book but rather as a concise companion to any of the text-books on the subject. Taken in this light the book will be found useful both by students and practitioners. The work is divided into three parts. In the first an account is given of the official drugs and their actions. The reason for adopting the plan of considering the drugs before the galenical preparations has been to enable the student to have some knowledge of the drugs themselves before commencing to study their preparations. We certainly think this will be found the more interesting way. The descriptions are well given, and a brief but clear account follows of the action of the drugs. In the second part the galenical preparations are enumerated and their ingredients, strength, and dose are duly stated. In the third part a few remarks are made on prescription writing, and the various classes into which drugs are divided are adequately described. A number of prescriptions are then set out which may be found useful in the early days of practice. The formulæ are given according to the total quantity of the remedies prescribed. We believe that the student will learn prescribing more accurately if the single dose of each constituent is stated; for then he must realise the exact amount of each drug that is used, and "build up" the prescription accordingly. Otherwise prescription writing is apt to become mechanical and simply the result of memory.

A Code System for the Hospital Pathological Laboratory. Part I. *Autopsy Work, being a Students' Guide to the Description of Autopsy Organs.* Pp. 34. Price 35 cents. Part II. *Histological Work: a Guide to the Description of Microscopic Sections of Pathological Tissues.* Pp. 20. Price 35 cents. By O. C. GRUNER, M.D. Lond., Pathologist to the Royal Victoria Hospital, Montreal, &c. 1913. Toronto: Murray Printing Co., Limited; London: H. K. Lewis.—These two brochures are intended to supply a convenient system for preserving in an abbreviated form the notes of pathological findings, a series of numbers being used for sentences descriptive of conditions present. Thus the figures "1. 11." would together mean "Circulatory System: the pericardial cavity is obliterated by tough adhesions," and so forth. In the second part the points to be observed in studying the different organs histologically are indicated, but the code of numbers for recording them is held over for a further part. It is difficult to judge how far such a system might prove useful. It would certainly facilitate the preservation of very brief notes with a key to elucidate them, but it would seem to involve a considerable waste of time both on the part of the pathologist who had to work the code in the first place, and still more of those who had subsequently to decipher it.

Herbal Simples Approved for Modern Uses of Cure. By W. T. FERNIE, M.D. Third edition. Bristol: John Wright and Sons, Limited; London: Simpkin, Marshall, Hamilton, Kent, and Co., Limited; Toronto: The Macmillan Company of Canada, Limited. 1914. Pp. 596. Price 6*s.* 6*d.* net.—In THE LANCET for Sept. 21st, 1895, we reviewed the first edition of Dr. Fernie's book on herbal simples, the third edition of which now lies before us. We can only repeat our commendation of the large amount of knowledge and research shown by the author, and at the same time express our satisfaction that some of the extreme statements in reference to certain simples have been toned down. The work is much altered since its first appearance. It is 17 years since the second edition was published and we must congratulate the author on his mental vigour at an advanced age, as evidenced by a complete revision of his work, which is now enlarged by additions from another of his works entitled "Meals Medicinal." The book now contains 183 articles on individual herbal substances or groups thereof arranged in alphabetical order with the addition of many crossheads. These articles make reference to upwards of 580 "simples." They contain a vast mass of information, including the folk-lore concerning and references to the various drugs in the literature of ancient and modern times and many lands. The author's style is quaint, and the book is an excellent one to browse on in leisure moments. Here is how he silhouettes the horse

chestnut: "Taken altogether, the horse chestnut, for its splendour of blossom and wealth of umbrageous leaf, its polished mahogany fruit, and its special medicinal virtues is *facile princeps*, the belle of our English trees. But, like many a ball-room beauty, when the time comes for putting aside the gay leafy attire it is sadly untidy and makes a great litter of its cast-off clothing." The book ends with a 16 page index of diseases and their appropriate simples.

The Elements of Bandaging and the Treatment of Fractures and Dislocations. By WILLIAM RANKIN, M.A., M.B., Ch.B. Glasg., Dispensary Surgeon, Western Infirmary, Glasgow. London: Henry Frowde and Hodder and Stoughton. 1913. Pp. 116. Price 5*s.* net.—This little book is a valuable guide to the application of bandages, to the use of splints for fractures, and to the reduction of dislocations. In the section dealing with bandaging the author does not describe all the forms of bandages, but he confines himself to those forms which he has found most useful. In the same way in the account of the methods of treatment of fractures only those methods which the author prefers are described. We do not in the least degree find fault with this arrangement; it is probably that which is best for the learner and also for the practitioner who wishes to deal with a condition with which he is not familiar. The author is very emphatic in advising the routine use of anæsthetics in the diagnosis and reduction of fractures. We agree on the whole with this advice, but we cannot help thinking that he lays down rather too absolute a rule, for it must not be forgotten that an anæsthetic is not such a slight matter as many appear to think. On one other point we offer a criticism. In the account of Bryant's triangle, why does the author trouble to mention the third side formed by the line drawn from the anterior superior iliac spine to the tuber ischii? It is absolutely useless and serves to confuse the student. This author is not alone in this; nearly all the text-books err in this matter. It is, indeed, far better to speak of "Bryant's line," for it is only the base of the triangle which is important. The book is well illustrated.

MISCELLANEOUS VOLUMES.

IN *How to Become Efficient* (London: T. Werner Laurie, Limited. Pp. 144. Price 1*s.* 6*d.* net) Mr. T. SHARPER KNOWLSON states that "the underlying idea of efficiency is to do whatever we have to do in the right way." Lack of efficiency, he says, is shown by waste substances and waste movements. This idea, he proceeds to demonstrate by many illustrations drawn from various phases of industrialism, can be attained by the application of "the scientific method" to materials, methods, and men in business life. After an extension of the argument in greater detail he proceeds to the consideration of efficiency in politics, municipalities, and the home, and finally arrives at personal efficiency, which is really the substance of all other efficiency, since no kind of organised, coöperative, or corporate efficiency can ever rise higher than the quality of its constituent members. Here the question of efficiency in education naturally comes in, and what he has to say is for the most part sensible and sound, if not above criticism in a few particulars.——As in the case of her "Care of Infants," Dr. MILDRED BURGESS in *Health* (London: H. K. Lewis. 1914. Pp. 175. Price 1*s.* 6*d.* net) has followed the syllabus of the London County Council's course of lectures on this subject, and this work includes much matter therefore that has hitherto had to be culled from different books. The subjects dealt with are the Phenomena of Life, Air and Ventilation, Water, the Dwelling House, Food and Feeding, Diseases connected with Food, Clothing, Personal Hygiene, Exercise, and Infectious and Communicable Diseases. The original diagrammatic illustrations by Miss Cartwright are very useful and there are coloured plates representing food values and the commoner disease germs respectively. In this way there is conveyed a great amount of very practical information, so far as we have had an opportunity to observe scientifically accurate, yet expressed in language easily comprehensible by any intelligent person. The chapter on the dwelling house contains much information that it would be hard to find elsewhere.——*Demonstrations on Infant Care* (London: G. Bell and Sons, Limited. 1914. Pp. 53. Price 8*d.*), by Mrs. KATE TRUELOVE, with an introduction by Lady ST. HELIER is interesting. That all girls should have their natural mother instinct as displayed in their universal fondness for dolls turned to advantage by cultivation in mothercraft during childhood seems sensible enough, and in this little book a syllabus is given of the method of teaching infant care which the writer has found effective and interesting, by allowing the girls to demonstrate with a washable doll. The demonstrations include the whole ritual of bathing, weighing, dressing, feeding, and resting baby, with elementary instruction what to do in convulsions, concussion, choking, burns, scalds, wounds, and cuts. The information given appears to be entirely sane, practical, and adequate. There are many useful illustrations, and the book is nicely bound and well got up.

In *A Description of the Imperial Bacteriological Laboratory, Muktesar: its Work and Products*, by Major J. D. HOLMES, D.Sc., M.R.C.V.S., Imperial Bacteriologist (Calcutta: Government Printing Press. 1913. Pp. 125), a short history is given of the work carried on in the Himalayan hills in India, to which reference was made in our issue of Jan. 17th (p. 193). There are numerous illustrations, and a good idea is given of the equipment and practical management of such an institution, and of the benefits, sanitary and financial, that accrue to the community from its existence.——The second volume of the *Transactions of the Ninth Session, Australasian Medical Congress, 1911* (Sydney: W. A. Gullick. 1913. Pp. 733 to 1346), contains the papers read in the Sections of Ophthalmology; Psychological Medicine; Diseases of Children; Naval and Military Medicine and Surgery; Dermatology; Radiology and Electricity; and Laryngology, Rhinology, and Otology. Many of these are of great interest and show the rapid advance that is taking place in all branches of medical knowledge in the great Commonwealth of Australia.——*The Transactions of the Medico-Legal Society, 1912–1913*, Vol. X. (London: Chas. Griffin and Co., Limited. 1913. Pp. 209), edited by WILLIAM A. BREND, contains the presidential address of Earl Russell on the Relationship between Medicine and Law; and papers on Shock, by F. G. Crookshank, M.D.; Legal Problems Relating to Medical Services under the National Insurance Act, by Roland Burrows, LL.D., barrister-at-law; Responsibility in Regard to Certain Forms of Unsoundness of Mind, by Robert Armstrong-Jones, M.D.; First Steps Towards a State Medical Service, by Professor B. T. Moore (commented on in our columns of May 24th, 1913, p. 1469); the Examination of Minute Traces of Blood for Medico-Legal Purposes, by Professor Harvey Littlejohn, M.B.; and the Necessity for Amendment of the Law Relating to Coroners and Inquests, by W. A. Brend, M.B., barrister-at-law.[1] The Transactions are now under the editorship of Mr. R. Henslowe Wellington.

Mr. T. GIBSON BOWLES has published, with an introduction by himself, the proceedings in court and official court documents in the case of *Bowles* v. *The Bank of England* (London: Butterworth and Co. 1914. Pp. 152). This case, it will be remembered, was brought on public grounds to restrain the Bank of England, as the agents of the Treasury, from deducting income tax before it had been rendered legally due by the passing of the Finance Act. The judgment affirmed the principle the maintenance of which cost John Hampden his life, with the practical result of ensuring the passing of the Finance Act imposing the year's income tax by August each year.

The papers set at examinations are eagerly sought by students both for the purpose of showing the trend of questions likely to be asked of them and as material for study

[1] THE LANCET, May 17th (p. 1404) and 24th (p. 1465), 1913.

and revision. In *Fellowship Examination Papers for the Diplomas of the Royal College of Surgeons, Edinburgh* (Edinburgh: E. and S. Livingstone. Pp. 80. Price 1*s.* net), we have the papers set at these examinations from 1906 to 1913; and in *Dental Examination Papers for the Diplomas of the Royal College of Surgeons, Edinburgh, and the Royal Faculty of Physicians and Surgeons, Glasgow* (same publishers and price. Pp. 90), the questions cover the same period of time.

JOURNALS AND MAGAZINES.

The Military Surgeon. Chicago, U.S.A. Edited by Brigadier-General SAMUEL C. STANTON, Illinois National Guard (retired).—Major Robert Brooke reports in the number for March that Cebu, in the Philippine Islands, is exempt from malarial fever. He investigated the mosquitoes present, and succeeded in capturing only Culex fatigans, and of the anophelinæ only Myzomyia rossii and M. ludlowi, in which the malarial parasites are not found or do not go on to complete development. Major Brooke has not so far been able to determine the condition which prevents the settlement of ordinary anopheles in this district. As he says, the solution of this problem is worthy of much consideration, and may lead to measures valuable in the prevention of malarial fever. We hope he will tell us more by and by.—Major W. N. Bispham has a good paper on Malingering. One of his patients was very deaf. He was told to blow his nose. As he pulled out his handkerchief an orderly dropped a halfcrown on the floor and the deaf patient stooped down quickly to get it and was sent to duty.—Captain Louis C. Duncan presents an account of the medical services in the Russo-Japanese War, apparently translated from the Swiss. All the praise is given the Japanese. The Russian doctors seem to have been paralysed through not having an autonomous organisation. The senior officers of the larger medical units were laymen, generals and the like, and of course not the best generals. The same difficulty was noted amongst the Russians in China in 1900; they require many more officers than other soldiers, being so accustomed to have all initiative forbidden them, and sanitary detachments were sometimes on the spot where they were wanted but would do nothing for want of orders. As there was no routine for searching out and removing the wounded, a severely wounded man and his kit were quite often removed to the rear by six comrades from the firing line. The number of wounded, also, was overwhelming, and at the front there were only unwarmed horse-trucks for them, so many were frost-bitten on the way back; also, for lack of staff to feed them, they were starving. But Russia is capable of great things, and the service of the Red Cross and the Empress's hospital trains did an enormous amount of first-class work.—The annual report of the general in charge of the United States militia notes how sketchy is its sanitary organisation. Each State provides its own militia, and the results are uneven. While Massachusetts has 44 medical officers and 146 men, Louisiana thinks it worth while to raise only 2 medical officers and 22 men. An appeal is made that each man enlisted shall be vaccinated against typhoid. Enough vaccine was issued last year for 15,000 men, but the number on whom it was used is not stated. There would seem to be some red tape used in the War Office of even so free and enlightened a republic as the United States of America, for the question of a telephone for a surgeon at a Philadelphia hospital had to go to the Judge Advocate General to decide if it could be borne by public funds.

The American Journal of Tropical Diseases and Preventive Medicine. New Orleans. Edited by CHARLES CHASSAIGNAC, M.D., and ISADORE DYER, M.D. $2.50 a year; single copies, 25 cents.—The March issue contains an article on an Epidemic of Paratyphoid Fever, by A. N. Sinclair, bacteriologist to the Territorial Board of Health, Hawaii, the gist of which is that the outbreak appears to have been traced to a carrier whose fæces contamined the excremental manure, so that the disease was disseminated by vegetables.—Foster M. Johns and Percy L. Querens give a further Note on the Growth of Filarial Embryos in Vitro, in which the embryos of filaria immitis and setaria labiatopapillosum in dextrose defibrinated blood respectively from dog and cattle exhibited growth and motility for 15 and 52 days, after which degeneration of both media and organisms occurred.—Echeverria cites experience in Costa Rica to demonstrate the innocuousness of bites by the malaria and yellow fever mosquitoes during the daytime.—William H. Deaderick gives the outline of an elaborate scheme of search for municipal sanitary defects.

Bulletin Mensuel de l'Office Internationale d'Hygiène Publique. Paris: Office International d'Hygiène Publique, Boulevard Saint-Germain.—We have before us the last issues of this valuable periodical, which was started by international arrangement some eight years ago. The number of nations actually participating in the work of the International Sanitary Office is 31, but to attain this total we reckon Great Britain, British India, Australia, and Canada separately. Many small nations participate and most of the large ones, but Germany is absent. This does not prevent the publication of a considerable amount of news from, or documents dealing with, Germany. Thus the February number gives the latest German enactments relating to measures against leprosy, and the new regulations for the inspection of ships passing through the Kiel canal. Somewhat disheartening information is recorded from Spain. In spite of the terrible lesson taught by devastating epidemics, and the generally speaking high death-rate, the fundamental question of the water-supply of Spanish communities has made but little progress towards solution. A Royal Order has been issued by the Government which commences with the announcement that there are on an average 50,000 cases of typhoid fever annually in Spain, resulting in at least 7500 deaths, and adds that a pure water-supply is the best preventive. In Spain there are immense obstacles yet to be surmounted. There is neither the knowledge nor the money necessary to improve the water-supply of the country generally. Therefore, and as being easier to manage, and above all much cheaper, this Royal Order recommends all the local authorities to encourage the employment of antityphoid vaccine. Yet without going further than the *Bulletin* before us, page after page contains elaborate descriptions of what has been done in almost every part of the world to increase, to purify, to filter, and to sterilise the water-supply of towns and the country. The same may be said concerning the prevention of the contamination of rivers and water generally by the treatment and purification of sewage. Indeed, the *Bulletin* through its monthly issues is a compilation of the laws enacted, the public works undertaken, and the sanitary experiments made in all the civilised parts of the world, and deserves wider publicity.

ROYAL COMMISSION ON VENEREAL DISEASES.

AT the twenty-ninth meeting of the Royal Commission on Venereal Diseases evidence was given by Sir Victor Horsley. He said that the experience of the last 25 or 30 years led to the conclusion that these diseases were decreasing in virulence; it was his impression, however, that they were extremely prevalent. It was not possible to speak statistically of the amount of prevalence, and the position in this respect would not be remedied until confidential registration of deaths had been adopted. This reform had been advocated by the British Medical Association for many years. The Association also put forward some 10 years ago the proposal that in every coroner's district there should be an officer appointed whose duty it would be to make such post-mortem examinations as might be necessary to determine the exact causes of death. That proposition had relation not merely to ordinary deaths, but above all to the examination of stillborn children; if it had been accepted the Commission would have been in possession of material relating to ante-natal conditions revealing the exact prevalence of syphilis. It was very desirable that this arrangement should be carried out with a view to the discovery of ante-natal conditions, not merely syphilis, but other pathological states. The Notification of Births Act under which stillbirths are notifiable should be compulsorily extended to the whole country. Sir Victor Horsley was of opinion that the education of the public in regard to venereal diseases was enormously important, and that children should be instructed in sex matters. If the nature study part of elementary education

were extended and every child taught the groundwork of hygiene, the health of the body, the instruction in sex matters could without injury gradually be brought into the mind of the child. So far as education related to reproduction in man it should be given individually and not as class instruction. In secondary schools children should receive full instruction. At the present time instruction was also necessary for adults. The teaching should be given by laymen; if it were in the hands of medical men it would be regarded as part of a medical mystery.

Sir Victor Horsley dealt at some length with the difficulty with which medical practitioners are frequently faced in public health matters by reason of the law of libel. It was perfectly obvious, he said, that from the public health point of view a medical practitioner ought to be able to warn somebody who to his knowledge was likely to be infected with venereal disease, but under the law as it stood he would render himself liable to a libel action and would undoubtedly be ruined. A medical man ought to be able to state what he thought was the cause of a particular disease, but the information should only be given to people who had a right to demand it. Sir Victor Horsley said that he was in favour of the notification of venereal diseases to the medical officer of health. He thought that a system of notification would not improbably be resented both by medical practitioners and by the public, but the history of notification showed that objections had been very strongly brought forward even in regard to the simplest diseases. The notification of scarlet fever was violently resisted at first, but there is no difficulty about it at the present day. Every argument that he had heard used against the notification of venereal diseases had also been used against the notification of so-called simpler diseases. The notification should be confidential and he had no fear of its confidential character being invaded; for this reason he did not think that a distinction could be drawn between venereal and other diseases on the ground that a moral stigma might be alleged in the case of the one and not in the case of the other. With regard to the diagnosis and treatment of venereal diseases Sir Victor Horsley said that he was in favour of treatment in special wards of general hospitals, and he thought that every health authority should have its own bacteriological laboratory for the diagnosis of disease. He did not think that adequate facilities for diagnosis or treatment would be provided unless there was a subsidy from the State.

At the thirtieth meeting Dr. Florence Willey, assistant physician for diseases of women at the Royal Free Hospital, gave evidence.

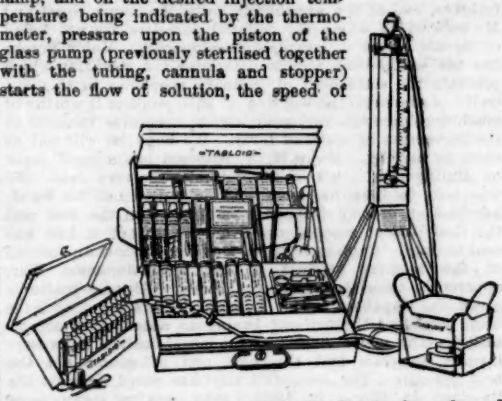
Dr. Willey urged strongly the need for early and effective treatment of both gonorrhœa and syphilis, and said that in order to secure such treatment it was necessary to provide, firstly, for the early and scientific diagnosis of all suspicious cases, and, secondly, for some means of efficient treatment of such a nature that infected persons would willingly avail themselves of it. It would be necessary, she thought, to provide free of cost facilities for carrying out Wassermann tests and bacteriological examinations and for the post-mortem examination of stillborn children and miscarriages. The results of such post-mortem examinations should be notified to the medical man attending the case in order that he might be enabled to secure efficient treatment for the mother in cases which were shown to be syphilitic.

Dr. Willey thought that clinics for the treatment of venereal diseases should form part of the work of an institution not wholly devoted to those diseases; they should preferably be part of the work of a general hospital and should be arranged at hours convenient for the working classes. Evening clinics, she said, were very desirable. On the question of notification Dr. Willey said that she was strongly of opinion that any scheme of notification by name would defeat the end in view, and she therefore advocated that all material sent for diagnosis should be identified by number only. She further suggested that all patients under treatment should be given definite instructions which would enable them to avoid infecting other people and that all nurses should be fully instructed in the nursing details of these cases and in the special precautions necessary in each disease to avoid infecting themselves and other patients. As a preventive measure she thought the instruction of young people in matters of sex hygiene was very desirable.

New Inventions.

"TABLOID" BRAND MEDICAL EQUIPMENT FOR THE TREATMENT OF CHOLERA.

AN obvious advantage in the treatment of cholera by the intravenous injection of saline solutions is the suitable provision of all the apparatus needed. The "Tabloid" medical equipment No. 363 (Messrs. Burroughs, Wellcome, and Co., Snow Hill Buildings, E.C.) is compact and complete, and contains several improvements which facilitate the somewhat complicated technique of this treatment. The saline solution, made from the "Soloid" products in the case, is sterilised in the 25-oz. flask by heating over the spirit lamp, and on the desired injection temperature being indicated by the thermometer, pressure upon the piston of the glass pump (previously sterilised together with the tubing, cannula and stopper) starts the flow of solution, the speed of



which can be read in a few seconds by the simple scale and controlled by the special pattern regulator. The sphygmometer and the set of glycerine dilutions enable the patient's blood pressure and the specific gravity of the blood to be readily ascertained. Every other detail necessary for the treatment of cholera by saline transfusion, as advocated by Lieutenant-Colonel Leonard Rogers, I.M.S., is included in this equipment. The items include: Metal and glass cannulas, an all-glass hypodermic syringe, forceps, bandages, clinical thermometer, "Vaporole" iodine tincture for sterilising the site of injection, "Vaporole Infundin" pituitary (infundibular) extract, and a steriliser for instruments, rubber tubing, &c. In addition to these, supplies of "Tabloid" potassium permanganate (keratin-coated) and "Tabloid" calcium permanganate (keratin-coated) are included.

THE "HANDIESQUE" SPRAY.

THE simplicity of construction of this spray apparatus will be apparent from the accompanying illustration. It consists of a pear-shaped glass bulb in the centre of which is a narrow glass tube through which air is forced by means of hand compression bellows. We find that it gives a fine spray, whether oily, aqueous, or spirituous solutions are used. Its application is indicated chiefly in the local treatment of morbid nasal and pharyngeal conditions. It is very compact and light and is easily cleansed or sterilised. The bulb is made of toughened glass, and its contents can be preserved by fitting a cork into the neck. It reduces the ordinary inconveniences of a spraying apparatus to a minimum. The "handiesque" throat and nose spray has been introduced by Messrs. C. J. Hewlett and Son, Limited, of 35-42, Charlotte-street, London, E.C.

THE LANCET.

LONDON: SATURDAY, APRIL 25, 1914.

The State the Mother, and the Child.

STUDENTS of current social movements cannot fail to observe the strength of the efforts which are now being made to extend State action in all that relates to maternity and infant welfare. To this there are many contributory causes, the most prominent perhaps being the attention which has been evoked by the operation of national insurance to the disabilities entailed on working women by pregnancy. Simultaneously, as a result of the work of public health authorities in connexion with notification of births, it has become realised that excessive infant mortality to a very large extent occurs during the first few weeks of life, in circumstances often to be attributed to malnutrition or definite illness of the mother, to inefficient midwifery, or to other remediable conditions. Then, again, education authorities, which now undertake systematic medical examination and treatment of children who have reached school age, have found that the ailments or defects of the children should in many cases have been detected and dealt with before the age of compulsory school attendance was reached, or might have been prevented altogether by suitable advice to the mother or hygienic management of the child at an earlier stage. An extreme instance, for example, is the child coming to school showing the results of congenital syphilis, which need not have developed if syphilis of the mother had been detected in the ante-natal period. Towards meeting the demand thus arising, much is already attempted or done by various official bodies, so far as their functions permit, and as much, or perhaps more, by the large number of semi-official and voluntary associations which in one form or another undertake what is termed "infant-welfare" work, and by charitable institutions and maternity hospitals. But the multiplicity of uncoördinated work by existing authorities and organisations in advising, visiting, inspecting, and treating mothers and infants causes much inconvenience and waste of effort, besides being incomplete in many essential respects.

A movement to obtain a new and better order of things, lately organised by the Women's Coöperative Guild, deserves special attention, as it is typical of much which is being proposed in other quarters. Briefly, it is a proposal for local municipal action, largely at the cost of national funds, to establish maternity centres to supply medical and nursing supervision for pregnant women of the working class, to provide and pay municipal midwives, to support maternity hospitals, and to supervise the health of the child until school attendance begins by a large extension of home visiting, infant consultations, and clinics. It is suggested that as an "endowment of motherhood" the sum of £7 10s. (absorbing the present maternity benefit) should be granted by the State for every child born, the major part of which would be given to the mother in connexion with the municipal supervisory system. Social reformers who are individualists, if any such remain, may question the expediency of State action in such directions as these, on the ground that parental responsibility will be further weakened, and may object to opening the door widely to further innovations, such as the municipal nursery and crèche, which would probably follow on a considerable scale. The eugenist also may ask, without much expectation of being satisfied, what steps the State proposes to take to see that the children thus encouraged and adopted are the right material for the next generation, arguing that the more desirable class will be less disposed to supply children for municipal officers to bring up, so that the stock will be recruited from the less efficient. Such arguments, however, usually appear to be pleas for inaction, while the supporters of the movement to which we refer have behind them substantial and practical reasons for requiring something to be done, in which they are unquestionably in accord with the general spirit of the time. In its medical aspects there need be no hesitation in supporting the contention that if national money and organisation are made available much invalidism of mothers, and death and disabilities of children, can be prevented. The recent trend of medical work, including developments in the education of medical students as to the care and hygiene of infancy, tends to increase the efficiency of the service which medical science is already able to render in this direction.

The movement towards more definition for the work which the State can undertake in behalf of the mother and the child appears to have received an encouraging reception from the Government, and evidence of its practical progress is afforded by an active controversy which is proceeding as to the national authorities by which official maternity and infant welfare work should be carried out. On the one hand it is contended that the local education authorities, under the direction of the Board of Education, are already, with the aid of national funds, so organised that development comes naturally through the enlargement of the school medical inspection service, the further training of midwives by education authorities, the education given in the schools in matters of hygiene to the mothers of the future, and generally through the adaptation of much organisation which is well developed under the education authorities and ready to hand. To this it is replied that by similar arguments almost any administrative work in the country could be brought within the category of education, and that

it is only an accident of our administrative system which makes it possible to think of imposing these duties on education authorities and not on the sanitary authorities, to which they would naturally fall. It would certainly seem shortsighted to ignore in this connexion the extent to which many sanitary authorities, under the direction of the Local Government Board, have already developed home visiting and other work in connexion with the Notification of Births Act, while it seems useless to hope for the success of educational methods of hygiene in overcrowded and insanitary environment. It is on every ground desirable that these administrative problems should be freely brought to notice and publicly discussed at the present time. Recent experience has shown that the bringing of schemes of social improvement which are dependent on medical considerations into the arena of politics and legislation is not without its dangers. It is flattering to medical science that the politician should take it for granted that medicine can work wonders, if only a new measure is passed or a new form of administration is set up which is convenient to the political or departmental conditions of the day. But care must be taken that medical science is given a fair chance, and too much thought can hardly be given to the essential objects which should be kept in view in any new administration which it may be proposed to set up.

What is a Cure?

IT is at times a useful exercise to examine the exact significance of a well-worn expression and to endeavour to divest it of error. Science has for its object the exact study of natural phenomena, and it is therefore a matter of great regret that words are often used in an inexact manner by men engaged in the application of scientific methods. Few words in medicine are so loosely used, indeed so often misused, as the word "cure." Even by those who should know better it is employed to indicate both the favourable termination of a disease process and the means used to secure that end. It is, therefore, not surprising that the lay public so generally fail to appreciate the difference between cure of a disease, arrest of its progress, and amelioration of its effects. That they speak more or less vaguely of a complete cure, a new cure, a "grape" cure, or a cure at this or that spa is to a great extent the fault of medical men, who use the word loosely without due regard to its meaning and without remembering that in some places it will receive one hackneyed interpretation, and elsewhere another; while its slipshod employment leads to frequent mystification and its vogue in quackery is a positive peril. It is a word which is, or should be, but rarely used by the scientific physician or surgeon, but it is the greatest favourite with the empiric and the charlatan. The prime object of therapeutics is a *restitutio ad integrum*, the patient recovering sound health, with no dormant focus of disease and no irreparable damage. Disease is too often considered as a static condition, an incubus which can be shaken off, whereas it should be regarded as a dynamic process, a progressive and active interference with function, whether produced by chemical, mechanical, or bacterial agencies, and whether inherited, autogenous, or exogenous in origin. The moving finger writes in disease as well as in life, and there are few disease processes which do not leave their impress upon the organism in some chemical, anatomical, or functional alteration. "Nothing ever gets completely well" was the burden of an aphorism enunciated years ago by a great medical philosopher who was no pessimist in regard to treatment.

An interesting example of the scientific method applied to the study of the effects of a remedy in the treatment of an abnormal condition, in order to determine whether it can be regarded as effecting a relief from that condition, is afforded by the paper by Dr. JOHN FREEMAN on Vaccination against Hay Fever, which is published in our present issue, at p. 1178. This disease lends itself well to the conditions of experiment. The causal agent is known as regards a certain definite group of symptoms, while treatment, other than removal from the influence of the pollen, is recognised to do no more than palliate the symptoms—circumstances which render the factor of susceptibility the all-important one from the point of view of rational therapeutics applied with the object of effecting a removal of the condition. The treatment, in regard to which some details have already appeared in our columns,[1] consists in the attempt to produce active immunisation against hay fever by means of inoculations with a pollen vaccine. The investigations in this direction were originally started in 1910 and 1911 by the late Mr. L. NOON, and have been continued since by Dr. FREEMAN, who now gives reports of his results during the last three years. His instructive analysis of these results will be read with great interest, and it would appear to justify his conclusion that the treatment has succeeded. It is too early yet to speak of this vaccine as a means of cure, since it appears that the immunity conferred by inoculation in one year may remain complete for a second year, but diminishes markedly in the third year unless further inoculations are given; but the results are such as to encourage the hope that we now have an effective curative method of treatment of this distressing condition.

It is clear that to effect a veritable cure of a patient suffering from a disease we must first elucidate the cause, and then apply our methods of treatment to its removal, to the neutralisation of its effects, and the protection of the organism against its activities in the future. These things having been done, then, and only then, we can rationally refer to the cure of the patient. Owing to the effective appeal to the protective

[1] THE LANCET, June 10th and Sept. 16th, 1911.

processes of the organism the recovery from many acute specific diseases appears to be complete and permanent, and cure is thus the rule; but this is by no means the case in all, as the immunity conferred may be temporary only, and may in some cases be followed by increased susceptibility. When a poison has been neutralised by its antidote or got rid of by the excretory channels of the body we may speak of cure. On the other hand, where a disease process is only limited or shut off and its further spread prevented, while the causal agent remains we should speak of arrest, but not of cure. Where grave organic damage has occurred and function has been restored by vicarious activities we should describe the result as one of repair or compensation. It is a duty which the medical profession owe to the public to explain the distinction between recovery and cure.

Annotations.

"Ne quid nimis."

KUBISAGARI.

AN examination paper set by students for their examiners is no doubt unlikely to become an accomplished fact, though to many a student the alluring possibility must have occurred. If such a paper were set in medicine it might well open with the question "State what you know of kubisagari." The candidate could not take shelter behind the excuse that the matter is one that has not received attention in the text-books, for it is briefly described in Sir William Osler's well-known text-book of medicine. Kubisagari is a disease occurring in two small districts only, so far as is known; the one in North Japan, the other on the Franco-Swiss frontier. Doubtful sporadic cases have been reported elsewhere, but in these two widely-separated areas the disease appears to be endemic. In both there is a seasonal incidence, beginning in May and June, reaching its height in July or August, and ending in October or November. Dr. P. L. Couchoud, who contributes an interesting paper on the subject to the *Presse Médicale* for April, tells a story which shows the origin of the Japanese name of the disease. A young Japanese practitioner had just settled in a rural district in North Japan, when one day he found a peasant at his door with his head bent forward on his breast. When questioned as to what he wanted he was at first unable to speak, but he was soon able to explain that he was "kubisagari" (drop-head), the name given by the villagers to a complaint to which they had long been subject in the summer months. The symptoms are paresis of various muscles coming on suddenly during use of the affected parts, disappearing with rest, and returning with attempts to put them into action once more, loss of vision developing in the same rapid manner, and vertigo. For example, during milking the victim finds his hands become numb and useless, the head falls forward against the cow, and he rolls over on the ground. Gerlier, who was the first to observe the French cases, found that there was a flaccid paralysis of the extensors of the fingers. Each attack lasts about ten minutes, but one bout may run on into another. Various muscles may be affected, but fatigue is an essential provocative. As soon as the autumn comes recovery ensues in all cases. The attack usually begins in the afternoon, when the patient is tired; the duration of the illness is variable up to five months. In spite of deliberate and exhaustive study in both the districts affected nothing of importance was discovered as to the etiology, apart from these data—that cats and poultry might be affected, and that there was an indubitable connexion between the incidence of the disease and work in certain particular stables. It appears also that suckling infants are liable to acquire the malady if the mother is suffering from it. It is not to be wondered at that an infective origin should have been suspected, and it is mainly with the purpose of describing his bacteriological researches that Dr. Couchoud has written his paper. His positive findings are briefly as follow. From the cerebro-spinal fluid and from the milk of persons suffering from the disease he was able to cultivate a micrococcus grouping like a staphylococcus, growing on agar, not liquefying gelatine, and Gram-negative. Injection of cultures into cats reproduced the characteristic symptoms in two or three hours in a large majority of the experiments. Dr. Couchoud acknowledges that his observations must be confirmed by other observers before they can be generally accepted, and he points to the scientific interest of this singular disease as an inducement to research in a somewhat restricted field.

DR. WILLIAM HAWES AND THE ROYAL HUMANE SOCIETY.

Now that London is at last to be given an adequate ambulance service, it is interesting to call to mind the early philanthropic labours of Dr. William Hawes, an old Pauline and one of Oliver Goldsmith's medical attendants. The poet, as is well known, hastened his end by an excessive use of Dr. James's fever powders, of which course his doctors disapproved. Dr. Hawes was led to publish a work on the illness and death of Goldsmith in order that he might warn the public, in a self-drugging age, against using powerful medicines without due medical advice. The profits of the publication were employed to help in founding what was afterwards known as the Royal Humane Society. Dedicating the book to Sir Joshua Reynolds and Edmund Burke, who had deputed Hawes to manage the doctor-poet's bankrupt estate, Hawes says (p. 21): "As my late respected and ingenious friend Dr. Goldsmith was pleased to honour Dr. Cogan and myself with his patronage and assistance in the plan for the recovery of persons apparently dead, now on the point of being established in this kingdom, I think I cannot show a greater proof of my esteem for the deceased than by applying the profits of this publication to an institution the design of which was favoured by his warm approbation." This was written in 1774, and in 1781 Hawes published an address to Parliament on the importance of the Humane Society, on the score of humanity, philanthropy, and sound policy, and stated therein a variety of consequences which might be reasonably expected to follow the establishment of receiving houses. These were to be scattered over London, and thither the victims of casualties were to be carried. Nothing is said of an ambulance service, but a curious picture is painted of

sudden death and street accidents in an age when these were even more frequent than at present. "When sudden death happens (see Hawes—'Address to the King and Parliament of Great Britain,' edit. 3) by accident in the public street, or other places on land, too often the consideration of inconvenience overcomes the dictates of humanity, and no friendly door is open to receive the body; or, if there is, the attendants are ignorant of their duty." Hurriedly called in, the medical man finds a scene of real confusion. If poor, the victim of the accident lies in the open street among "a croud." If the apparent corpse shows signs of prosperity, "it may perhaps be raised from the ground and placed on a shop floor." The medical man always has to regret the absence of "necessary as well as proper assistance." First aid was not then taught, and Hawes at this time became its pioneer. He delivered lectures and distributed pamphlets gratis on the modes of recovering persons from syncope, inebriety, trance, drowning, suffocation by the cord, or noxious vapours, intense cold or lightning, and on stillborn children and the effects of poisons, and on the certain signs of death. These lectures closed in 1782 with an adjudication of prize medals, offered by Dr. Hawes. The first gold medal was presented to Dr. Pearson, of Birmingham, on behalf of the Humane Society by Dr. Lettsom, Dr. Fothergill, and others, his being considered the best dissertation on the question, "Are there any positive signs of extinction of human life, independent of putrefaction? If so, what are they? Or, if there be not, is putrefaction a certain criterion of death?" The medal bore the name of Dr. Hawes, the donor, and the now famous motto, "Lateat scintillula forsan." The Humane Society was actually founded in 1774 through the joint efforts of Fothergill, Hawes, and Cogan. In 1784 the classical-looking receiving house was built near what was then known as the Serpentine River. It was chiefly designed for the purpose of restoring animation in those who had been "plunged into the contiguous stream." At the time of its erection it was considered without rival in Europe, and it remains to-day to remind a careless generation of the zealous philanthropy of the latter part of the eighteenth century—a philanthropy inspired by lofty motives, however fantastic or inadequate in its realisation. Dr. Hawes was typical of his age, a good talker, with a strong sense of humour which must have endeared him to Goldsmith. But it is for his characteristic public spiritedness that he will be remembered in the history of his time.

TROPICAL DISEASES RESEARCH FUND.

THE report of the advisory committee for the Tropical Diseases Research Fund for the year 1913 has just been presented to Parliament and is now issued as a Blue-book (Cd. 7261)[1] by the Colonial Office. The committee, which was constituted by the Secretary of State for the Colonies in July, 1904, is now composed as follows: The Right Hon. Sir J. West Ridgway, chairman; Sir Thomas Barlow, Sir John Rose Bradford, Sir David Bruce, Sir R. Havelock Charles, Mr. F. H. Drake, Sir Patrick Manson, Mr. H. J. Read, Sir Ronald Ross, and Mr. J. A. C. Tilley, with Mr. A. B. Keith as secretary. The late Sir A. M. Branfoot, who had been a representative of the India Office from the first, resigned from the committee before this report was prepared, and his colleagues place on record their high appreciation of his constant interest and the services which he rendered. The report itself occupies barely two pages, the rest of the volume of 240 foolscap pages being devoted to detailed appendices. The first of the six appendices consists of reports on anti-malarial measures in the Crown colonies, protectorates, &c.; the second is the report of the professor of protozoology in the University of London, Professor E. A. Minchin, for the year ended June, 1913; the third is the report for 1913 on the work of the Quick Laboratory, Cambridge, by the director, Professor G. H. F. Nuttall; the fourth comprises reports from the London School of Tropical Medicine; the fifth contains corresponding reports of the year's investigations at the Liverpool School of Tropical Medicine; while the sixth appendix contains reports on work done in various colonial laboratories. These appendices include a large amount of valuable information from a large number of sources, and further reference will be made in these columns to the results of some of the more important investigations which are detailed therein.

[1] Wyman and Sons, Limited, Fetter-lane, London, E.C. Price 2s. 4d.

THE RELATION OF APPENDICITIS TO UMBILICAL COLIC IN CHILDREN.

A CONDITION has lately been described as "relapsing umbilical colic" by Professor E. Moro,[1] of Heidelberg. He points out that it is not infrequent in children over 4 years, that it recurs at regular intervals, and that the patients are, as a rule, neuropathic. He considers the attacks have no connexion with appendicitis, and he gives the following account of their most salient features. The child suddenly becomes pale and complains of violent pain in the region of the umbilicus, or between it and the ensiform process. The pain begins without apparent provocation, and frequently occurs while the child is at play, making him press both hands upon his abdomen. An attack may also occur while he is walking, sitting at table, or eating, but never in school. Such an attack may only last a couple of minutes or several hours, and it invariably recurs sooner or later. Not infrequently the attacks recur at regular intervals of two or three months, and they are seldom accompanied by vomiting. In three cases in which this did occur it was periodic or acetonæmic. The temperature is never very high, whereas a subfebrile temperature of 100·4° F. in the rectum is common. In 15 out of 18 cases the patients suffered from constipation, which was frequently accompanied by meteorism and rigidity of the abdominal wall. The parents would sometimes state that castor oil or an enema had at once relieved the pain, which had not improved under hot compresses. In support of his claim that these attacks have no connexion with appendicitis Professor Moro records the case of a girl aged 14, where the colic was accompanied by tenderness over McBurney's point. Laparotomy was performed next day, when the appendix was found to be perfectly healthy. Professor Moro's publication has drawn an emphatic protest from Professor Küttner,[2] who considers the dissociation of umbilical colic from appendicitis a dangerous teaching. He records in detail six cases to prove his contention that umbilical colic may be due to the appendix, even when this is found at an operation to be apparently healthy. In four of these cases the appendix was

[1] Münchener Medizinische Wochenschrift, No. 51, 1913.
[2] Berliner Klinische Wochenschrift, No. 4, 1914.

unusually long and was attached by a mesentery of a spiral form. This arrangement, he argues, must favour volvulus of the appendix during peristalsis, and the spontaneous correction of this volvulus probably synchronises with the cessation of the pain. Again, small and soft fæcal concretions, slight kinking due to adhesions, or an abnormal insertion of the appendix may, as some of his cases show, also be responsible for the attacks. Even when these slight abnormalities are not found the attacks may yet be due to spasm of the appendix, and in support of this hypothesis he records the following case. A lad of nervous temperament, aged 15, had lately suffered from attacks of fainting. For a considerable time he had also been subject to violent attacks of abdominal pain, which would occur without apparent provocation, or after he had shaken his abdomen while laughing. They would quickly pass off without being localised to any particular area of the abdomen. Although objective signs of disease could not be detected, the appendix was suspected, and as the lad was much inconvenienced by the attacks laparotomy was performed. Close to the base of the appendix was an annular constriction, beyond which the appendix formed a spindle-like swelling. The appendix was removed, and was found to contain fæces. Its microscopic examination showed a perfectly normal condition. There was no inflammatory stricture. That the appendix was responsible for the attacks is evident, for they did not recur after the operation. The permanent cessation of the umbilical colic in the remaining five cases is the most convincing evidence in support of Professor Küttner's contention. Professor Moro[3] has replied to these statements by pointing out that his patient whose abdominal pain led to the removal of the appendix was not cured by the operation. The discussion between these authorities resolves itself into the question whether the "wait and see" or the "look and see" policy is the wiser, and it is clear that weighty arguments are available for both points of view.

"HELMINTHEMESIS."

THE vomiting or expulsion by the mouth of intestinal parasites is a rare occurrence. The parasite most commonly expelled is the ascaris lumbricoides, which is remarkable for its vagrant habits. Under the apt designation of "helminthemesis" Dr. David I. Macht has published in the *Johns Hopkins Hospital Bulletin* for April two cases, in one of which segments of tapeworm were vomited. Vomiting of tapeworm is so rare that Davaine in his great work ("Traité des Entozoaires") could collect only five cases. Dr. Macht's patient was a white woman, aged 21 years and married, who went to the dispensary of the Johns Hopkins Hospital on May 19th, 1913. She stated that in December, while in the early months of pregnancy, she was vomiting frequently. One day after violent retching she vomited a portion of tapeworm. She called her mother, who ran to her assistance and pulled a further and large segment of the worm out of her mouth. The fright caused miscarriage. Two days later she passed two long pieces of worm per rectum, and since then had been passing for half a year small segments. She complained chiefly of weakness and nervousness. She was given half-drachm doses of oleoresina aspidii, and two days later brought a jar full of tapeworm which proved to be tænia saginata. The head could not be found. In the other case a round worm was vomited. A farmer, aged 25 years, came to the dispensary complaining of indigestion, pains in the stomach, and vomiting of worms. In the past three months he had lost 15 lb. in weight in spite of a good appetite. For the past four weeks his appetite had been ravenous, and he vomited a number of times in the latter part of the day. Three weeks ago, after severe retching, he vomited a worm. Before that time he never noticed any worms in the stools, but he had since. He felt weak and complained of pains around the waist. On examination he looked thin and pale. The tongue was heavily coated and the breath was foul. The temperature was 100·5° F. and the pulse 120. He was given grain doses of santonin, and two days later brought a jar containing 10 or 12 full-sized specimens of ascaris lumbricoides. Dr. Macht has analysed all the cases of tape and round worm treated at the Johns Hopkins Dispensary in the last eight years. There were 65 of the former and nine of the latter. About two-thirds of the cases of tapeworm occurred in women, who were almost all under 40. Vomiting occurred in 7 per cent. of the tapeworm cases. Of the ascaris cases only one gave a history of vomiting.

[3] Berliner Klinische Wochenschrift, No. 8.

THE BRUIT DE GALOP.

CLINICAL experience has attached considerable significance to this type of abnormal heart sound. It is usually of serious import. It has been called the *signum mali ominis*. Only lately, however, has any attempt been made to offer an explanation, not only of its cause, but also of the gravity of its meaning. The bruit de galop consists of a sharp doubling of the first sound—tă-tă, tă. It is, in reality, caused by a short sound appearing just before the first sound; that is, it is presystolic in time, and occurring as it does produces the double quality. This definite association with the first sound distinguishes it from the rhythm, also of galop quality, which is due to doubling of the second sound. This protodiastolic bruit de galop, common in mitral stenosis, is of entirely different significance. The bruit de galop is accepted as being produced by the strengthened systolic activity of the auricle, though the exact mechanism inducing it is a matter of some uncertainty. Some experiments are recorded by Offenbacher in the *Archiv für Experimentelle Pathologie und Pharmacologie* (1914, Band lxxvi., p. 1), which throw some light on the subject. The observations were made upon rabbits, the heart and pressure changes being recorded. They showed that strengthened auricular action occurs whenever there is a disproportion between the cardiac activity and the work which has to be done by the heart. Such disproportion, he was able to show, may arise when the heart is weakened by intravenous injections of solutions of magnesium sulphate; when the blood pressure is raised by compression of the aorta or the injection of adrenalin; by stimulation of the inhibitory nerves; or in the systole following the compensatory pause after an extrasystole. It is of interest to note that it is just these conditions, seen clinically, which favour the appearance of the bruit de galop; especially is this the case in chronic interstitial nephritis with failing heart. But this is not all. In this same clinical condition cardiac failure is especially prone to give rise to the type of pulse known as the pulsus alternans. In

this type of pulse large and small contractions alternate in regular succession. Both auricle and ventricle may participate, and it has been noted that the large auricular contraction may coincide with the small ventricular beat. Such a condition, however explained, reveals an exaggerated auricular action with weakened ventricular force, and presents an important analogy to the more sustained strengthened auricular action, apparently excited by weakened ventricular force, and associated with the bruit de galop. Both the bruit de galop, and probably the pulsus alternans, are caused by weakened ventricular action; both have on independent lines been held to be of grave significance; and now it seems that we have a rational explanation of both, and incidentally we find exact corroboration of facts which were clinically noted long before explanation could be offered.

GASTRIC TETANY.

THE pathogeny of this condition appears to remain as obscure as it was when Kussmaul first directed attention to it in 1869. It was to be expected, perhaps, that, under the later and still dominant school of thought which seeks explanation for most pathological conditions in infection, the infective origin of gastric tetany should be suggested. Others, who have studied the condition very fully, believe that it may be due to absorption of stagnant contents of a dilated stomach which poisons the nerve centres and thereby increases reflex irritation. Such theories, however, still leave the pathogeny a *terra incognita*. The symptoms of gastric tetany are striking. There is usually a prolonged history of dyspepsia; the signs may strongly point to gastric or duodenal ulceration; still more often is there evidence of dilatation of the stomach, for which perhaps lavage has been industriously carried out. The tetany itself is abrupt in onset. There occurs pain of crampy character starting in the stomach. This is soon associated with spasms of the muscles of the extremities, especially the hands and feet. The fingers are usually flexed at the metacarpophalangeal joint and extended at the distal joints—the "accoucheur's hand." The spasms may extend to the larger limb muscles, and even involve the face. The general irritability of the musculature is often so enhanced that small local stimuli may induce a spasmodic condition of groups of muscles; in this relation, Chvostek's sign is familiar. In severe cases the onset of the symptoms may resemble a convulsion; there is, however, no loss of consciousness, and the peculiar distribution of the spasms is diagnostic. The treatment may be medical or surgical; its objective is the stomach. A dilated stomach is the rule, and its cause is usually to be found in pyloric or duodenal ulceration. There are, however, exceptions. Frequent washing out of the stomach is of much assistance, but operative measures offer a more hopeful prognosis. Following a gastro-enterostomy recovery may be complete, though not in every case. In an instance of gastric tetany described by Rodman (W. L.) in the *Journal of the American Medical Association* (1914, Vol. LXII., p. 590) the spasms followed operative treatment for duodenal ulcer associated with gastric dilatation. Previous to operation no such symptoms had been present. Recovery eventually followed. This writer emphasises the failure of medical treatment for gastric tetany, but at the same time he deprecates too optimistic a view being taken of the success of surgical intervention. This view applies especially to those comparatively rare cases in which the spasms involve the muscles of respiration and the larynx. Asphyxia may ensue, and there is little hope of cure. General treatment should be directed to lessening the quantity of those substances in the dietary which favour fermentation.

A MONUMENT TO VESALIUS.

IN August next there will be erected among the wave-swept rocks of the island of Zante a monument to the memory of Vesalius, one of the great pioneers of modern surgery. The occasion will be the quatercentenary of the birth of Vesalius, who perished miserably on Zante on Oct. 15th, 1564, after being shipwrecked as he was returning from the Holy Land, whither he had made a pilgrimage in penance. The reason is somewhat obscure, but it is said to have been in consequence of his having, probably unwittingly, made a necropsy on a Spaniard who proved still to have been alive when the necropsy was begun. Dr. Tricot, who has taken the lead in securing this belated tribute on behalf of Belgium to one of her greatest sons, gave to his French colleagues at the Sorbonne the other day an interesting, if gruesome, account of the youthful enthusiasm of Vesalius, which led him when still a boy to feast his eyes, not upon the delicacies of the tuck-shop, but upon the display of meat and tripe on the butchers' stalls. His delight at an early age was to procure a bullock's heart or a sheep's kidney and to carry it home in triumph for dissection, and we are told that while his father, apothecary to Charles V., encouraged his pursuit of anatomical knowledge, his mother, not best pleased with the turn things were taking in the home, grumbled, but provided him with a bib and tucked up his sleeves to prevent disaster to his clothes. Then the time came when the young student must needs work upon the human subject, and nightly excursions to the place where the bodies of criminals were left to be devoured by scavenging dogs provided at great personal risk material whose examination made him, at an age when he was still learning his Latin accidence at school, the best informed anatomist in Europe. He entered the University of Louvain at an early age, proceeding to Paris in 1533, where he continued his grim search for truth among the human débris by the Montfaucon gibbet. In 1536 he returned to Louvain, as a teacher of his subject. He then went to Padua, where he became Doctor of Medicine, and was appointed in 1537 Professor of Surgery with the right to teach anatomy. He also conducted courses in anatomy at Bologna and Pisa. Vesalius was offered the chair of anatomy in Pisa, where he had conducted public dissections, but preferring the office of Archiatros to the Emperor Charles V. of Spain he went to Madrid, where he served that monarch and his son for 20 years—viz., until 1564—when he went on his ill-fated pilgrimage. Having thus reached certainty by long and accurate study at first hand, Vesalius waged wordy warfare with the Galenists, whom he effectually answered in his epoch-making "De Corporis Humani Fabrica Libri Septem" (1543) in which the old theories were confuted by practical experiment conducted under conditions of almost insuperable difficulty.

THE PREVENTION OF LIFE-WASTE.

ON Dec. 29th last there was incorporated in the City of New York a "Life Extension Institute," having for its aim the lengthening of human life and the safeguarding and increase of individual human efficiency. This end it proposes to achieve by the appointment throughout the land of expert medical examiners, with fully equipped clinical laboratories in all the larger towns, who will periodically examine the physical condition of its own policy-holders, of all the policy-holders of such life insurance companies as contract with it to do so, and for a small fee of any person not embraced in either of these classes, who may desire it. Schools, industrial establishments, and other associations will also be contracted with, and its aid will be further afforded in coöperation with the anti-tuberculosis, social hygiene, eugenics, and similar movements, and with the health authorities. It is thought that by this means "impairments" in the human machinery will be systematically detected while they are still remediable, and the damaged individual directed before it is too late to seek the aid of his medical attendant, who will be furnished with the collaborated findings of the institute's experts. The "Hygiene Reference Board" of the institute, which is to consist of 100 leading experts on various subjects pertaining to health, contains many names well known to the medical profession at large, among whom may be mentioned Surgeon-General Gorgas, the sanitarian of Havana and the Panama Canal Zone, Dr. William J. Mayo, Professor William H. Welch of Johns Hopkins University, Dr. Harvey Wiley, whose name is associated with the pure food laws in the United States, Professor Chittenden, of Yale, and others. The individual will benefit by having his attention called to beginning defects while there is yet time to repair the damage. The medical practitioner will find many of his patients directed to seek his care long before they would otherwise have done so, with the advantage of receiving a carefully collaborated physical report by various experts in their respective lines to work on. The insurance companies will have their losses from life-waste reduced as the fire insurance companies have long reduced their losses from fire-waste. It is further hoped that the vast material accumulated by the Hygiene Reference Board may in course of time enable it to furnish data whereby many disputed points in personal hygiene may ultimately be cleared up. The experiment will be watched in this country with interest: the prophecies of its future work, which we have set out, show its scope to be indeed comprehensive.

TRAUMATIC RUPTURE OF THE HEART.

IN the *Journal of the American Medical Association* of Feb. 28th Dr. B. J. O'Neill has reported a case of a very rare accident—traumatic rupture of the heart. A schoolboy, aged 9 years, while playing was set on by some older boys, who knocked him down and jumped on him. He walked home complaining of pain in the left groin, remained in bed two days, and then got up and about for four days, still complaining of pain in the left groin and hip. On the seventh day he was taken a distance of 30 miles by train to Dr. O'Neill, still complaining of the same symptoms. At no time did he complain of pain in any other part. He walked from the station to the office. Examination showed a well-developed boy walking with a decided limp and evidently in considerable pain. Slight redness and swelling over the left saphenous opening was discovered. There was considerable limitation of the movements of abduction and rotation of the left thigh. No examination of the chest was made. The boy was sent to hospital, where a skiagram of the hip and pelvis was taken and showed nothing abnormal. Hot fomentations were applied to the hæmatoma in the groin. The temperature was 98·6° F., the pulse was 102 and regular, and the respirations were 25. He rested comfortably until about 12 hours after admission. Then he suddenly collapsed, the pulse and respiration became very rapid, and he died in an hour. At the necropsy the pericardium was found bulging forwards, very tense and full. It contained about 500 c.c. of fresh blood and about 200 grammes of dark clotted blood. At the auriculo-ventricular junction on the left side was a perforating slit about 3 millimetres long above the middle of the anterior leaf of the mitral valve. The myocardium and valves were normal. Evidently the heart was ruptured at the time the boy was jumped on, and some hæmorrhage took place into the pericardium, which was followed by sealing of the perforation with clot. Some movement probably dislodged this clot, and death resulted from hæmorrhage into the pericardium. It is remarkable that the boy was up and about for four days with only the clot sealing the opening. The case illustrates the lesson which will never cease to require enforcing—the necessity for complete examination of a patient. Dr. O'Neill thinks that had this been done at least an approximate diagnosis might have been made.

THE ORGANISM OF EPIDEMIC POLIOMYELITIS.

THE discovery that the human disease epidemic poliomyelitis could be transmitted to monkeys opened the way to accurate experimental research on this infection, and many valuable papers have since been written on this subject. The work done at the Rockefeller Institute in New York by Professor Flexner, with the assistance of Dr. Noguchi, Dr. Paul Clark, Dr. Harold Amoss, and Dr. F. R. Fraser, has been largely recorded in the *Journal of Experimental Medicine*, and it may be useful to summarise the results which they have obtained. The micro-organism which is the infective agent has now been cultivated on artificial media, the method used being that devised by Noguchi for the cultivation of spirochætæ, human ascitic fluid being the basis of the medium, with the addition of small pieces of solid sterile tissue, the culture being kept anaerobic by covering it with a layer of paraffin oil. Thus grown the organisms appear as minute globular bodies arranged in pairs, chains, and clusters, and they can also be demonstrated in the infected tissues by means of appropriate dyes. Reinoculation of susceptible animals with the cultures has been effected in one or two instances, thus fulfilling Koch's second canon, but failures often occur owing to rapid loss of virulence in the organisms when introduced to artificial conditions. Their exact biological position has not yet been determined—whether they should be classed with the bacteria or with the mysterious group of chlamydozoa. Their minute size enables them to pass through the pores of a Berkefeld filter. Within the body the organisms are visible not only in the spinal cord, but also in the brain, vertebral and Gasserian ganglia, and abdominal sympathetic. Poliomyelitis is thus not a special disease of the anterior cornual cells as was previously supposed, but a general infection of the central

nervous system. The lesions produced are both interstitial and parenchymatous. Post-mortem multiplication of the parasites can be obtained by incubating pieces of infected brain tissue. The virus derived from a human source can be rendered more pathogenic for monkeys by passage through a series of these animals, but after a time this virulence tends to fall again. The channel of infection is not thoroughly ascertained. Flexner favours ingress by the lymphatics of the nasopharynx. Direct injection into the spinal theca may induce infection, but the virus then passes rapidly out into the blood stream, where it is apparently neutralised or destroyed. The blood is not often found to be infective, and direct injection into the circulation is an uncertain mode of inducing the disease. From the blood the virus seems incapable, as a rule, of entering the cerebro-spinal fluid; indeed, the interchange of constituents between this fluid and the blood seems to be usually minimal, as in the case of patients treated with salvarsan in whom injection of their own serum into the spinal canal has been practised as a means of introducing the remedy locally and thus combating syphilitic lesions of the central nervous system. Attempts to transmit poliomyelitis by the bite of the fly, stomoxys, were unsuccessful, and in view of the general features of the infection insect transmission does not appear a probable hypothesis.

WE regret to record the death of Dr. Thomas Frederick Pearse, late Medical Officer of Health of Calcutta, who died at Torquay on April 14th. Dr. Pearse was for many years one of the special correspondents of THE LANCET.

Mr. Herbert Jones, D.P.H. Cantab, medical officer of health for the Herefordshire Sanitary Districts, has been elected President of the Society of Medical Officers of Health immediately upon the conclusion of his term of office as secretary, a proof of the recognition by the society of his intimate knowledge of their views and his untiring industry in forwarding them. During the 60 years of the existence of the society the secretary has on six previous occasions attained to the chair, the instances being the late Sir George Buchanan, the late Sir Thomas Stevenson, the late Professor Corfield, Sir Shirley Murphy, Dr. Edward Seaton, and the late Dr. J. F. J. Sykes.

INAUGURATION OF THE NEW UNIVERSITY BUILDINGS AT ZÜRICH.—On April 18th the new university buildings of Zürich, erected at a cost of £240,000, were inaugurated. They are situated in an elevated position near the various hospitals and the Federal polytechnic school, and command a magnificent view from the terraces and the tower. They are to serve as lecture house and also contain the biological institute, while the new building for pharmacology and hygiene is situated at a short distance. The Federal Government, the Cantonal Government, and several scores of delegates from all parts of Europe attended the opening ceremony, which commenced with a musical cantata, the music being composed by Dr. Hegar. All the Swiss universities, 21 German universities, and the universities of Paris, Oxford, and Cambridge sent delegates. Dr. Keller and Dr. Locher spoke as representatives of the Cantonal Government, and Professor Egger as rector of the university. The speech of Dr. R. W. Macan, Master of University College, Oxford, was especially applauded. In the evening a banquet for 800 guests took place. On the 19th the guests made a trip down the lake in glorious weather. On the 20th the guilds of Zürich took part in a historical pageant representing the development of science from ancient to modern times.

SOCIETY AND SEX PROBLEMS.

THE intricate problem of the regulation of sex relationship in modern society is showing signs of a rapid progress through the normal evolution of all social problems out of the sphere of ethics into the sphere of sociology. The primitive state in which men at first approach all such problems is the ethical and emotional. They are filled with a repugnance, say, to prostitution, and they loudly demand measures for its regulation or suppression without realising the underlying conditions. The failure of these measures, where obtained, after a while leads up to the second stage. The condition of emotional animosity gives way to the spirit of scientific inquiry; the primitive axiom, "Something must be done," is succeeded by a desire for a knowledge of the actual facts and the collection of information from all sources that are open: the problem, in short, passes from the sphere of ethics to the sphere of sociology; from the sphere of emotional but ignorant action to the sphere of intellectual inquiry. It is only later that the social problem finally passes back once more to the sphere of ethics; but the action taken is no longer blind and emotional, it is guided by the results obtained from the impassive sociological investigations. Whereas the problem of marriage is still restricted within the first or ethical stage, the problem of prostitution has now fairly emerged into the colder air of sociology.

The Problem of Prostitution.

The pioneer work of Parent-Duchâtelet has paved the way to a number of modern investigations of great interest and value. Of these the most recent are the remarkable publications of the New York Bureau of Social Hygiene, formed under the auspices of Mr. John D. Rockefeller, jun. In the two volumes now published,[1] Mr. George Kneeland describes the present condition of prostitution in New York, while Mr. Abraham Flexner deals with prostitution in Europe.[2] Mr. Flexner devotes his attention mainly to the existing methods of administration and police supervision; while Mr. Kneeland, on the other hand, deals chiefly with the various forms, the resorts and the *personnel* of prostitutes and of the trade growing up around them.

We note with interest the tendency of both these, as of most other modern writers, to regard prostitution more as a result of environment than of congenital wickedness or stupidity. Since Lombroso formulated his theory of the *delinquente nato* there has been a steady progress of opinion in the opposite direction. Mr. Kneeland and Mr. Flexner do indeed affirm some connexion between prostitution and congenital weakness, though a connexion far slighter and more elusive than that postulated too crudely by the Italian criminologist. But it may be doubted whether the trend of opinion away from Lombroso has yet reached its goal. The prostitutes studied in the investigations under notice are very largely those under the supervision of the police, and those who live in bordels and hand more than

[1] Commercialised Prostitution in New York City. By George J. Kneeland. With a supplementary chapter by Katharine Bement Davis. Introduction by John D. Rockefeller, jun. London: Grant Richards. 1913. Pp. 334. 7s. 6d. net.

[2] Prostitution in Europe. By Abraham Flexner. Introduction by John D. Rockefeller, jun. London: Grant Richards. 1914. Pp. 456. 7s. 6d. net.

half their profits to the "Madame" or bordel-keeper. Now it may be safely affirmed that these are the weakest and stupidest of their class, and we can no more infer from them a general feeble-mindedness among prostitutes than we can obtain statistics of tuberculosis from an exclusive study of the population of hospitals. Deeply as congenital differences are rooted among our people, they are altogether obscured by the adventitious circumstances of birth and money. The master is not necessarily or even probably better than his servant, except in so far as he is better educated. And so, too, the young man in search of pleasure wreaks his sensuality upon the body of a woman who, according to an almost even probability, is of higher natural endowments than himself, and who owes her position purely to those economic forces which inundate and overwhelm the minor distinctions of nature. Whatever theory we form of the causes of prostitution, it must often happen that the woman, who under more favourable conditions might have been a valuable ornament to society, is butchered alive by successions of men who, but for the accident of birth, would have been gaol-birds.

Present Conditions.

The disclosure made by the American writers of the conditions under which the inferior prostitute lives is indeed startling. Instances are recorded where a woman receives over 50 men in one day; the city physician of Rome vouched for a case of 60 visitors; the mayor of Bordeaux reported to the French commission one woman who had received 82 clients in a single day. In Chicago, at a certain vice-resort, women were found to average 15 men a day for nearly two years. In New York one woman served more than 2000 men in a period of six months. In one house, where the fee charged is 50 cents,—

> A large wooden bench was placed against the wall of the receiving parlour. Business was very brisk at the time the investigator entered. The bench was full of customers crowded close together, while others, who could not be accommodated with seats, stood about the room. At the foot of the stairs which led to the bedrooms above a man was stationed. Every time a visitor came groping his way down the stairs the businesslike and aggressive announcer would cry out "Next!" At the word the man sitting on the end of the bench nearest the stairs arose and passed up. As he did so the men on the bench moved along and one of the men who were standing took the vacant seat.

In Europe the tendency for years past has been to suppress bordels (i.e., licensed and registered brothels). In Paris no new bordels are licensed; and the decline in number of the old ones is remarkable. In 1841 there were 235 bordels; in 1888 there were only 69; while in 1903 there were 47. This decline appears to be due to several causes, one of which is the intimate connexion of bordels with the white slave traffic. But the bordel is essentially a mediæval institution, unsuited in many ways to modern conditions. The women, however low their discrimination, cannot but dislike a contract under which they resign more than half their earnings to the manager, and are obliged, not only to accept every client that presents himself, but to submit themselves to any kind of outrage that his perverted whims may require of them. On the other hand, the men dislike an institution in which every mode of extracting their money is resorted to; and, moreover, they are beginning to learn that bordels do not afford a guarantee against the acquisition of disease.

The Case against Regulation.

Students of prostitution at the present day are divided into the two opposing camps of regulationists and abolitionists. The former school regard prostitution as a necessary evil, and demand that it should be controlled by Government; that its regular followers should be medically examined at frequent intervals, and receive licences to practise their calling so long as they are not found to be diseased. This is the system in operation in most continental countries. The abolitionists, on the contrary, demand the cessation, not of prostitution indeed, for that is obviously impossible, but of all regulation or recognition by the State of prostitution as a trade. This is the British view, and it is the view to which educated opinion is strongly leaning at the present time. The arguments by which abolition of regulation is defended are wholly different from those which led to the repeal of the Contagious Diseases Acts in the "eighties." They rest chiefly upon the fact that regulation after a long and careful trial has turned out to be a failure. Mr. Flexner, who is an ardent abolitionist, goes so far even as to affirm that regulation has probably increased rather than diminished the amount of venereal disease, on the ground that the protection supposed to be afforded is illusory, whereas the fancied security increases the volume of the prostitute's business. The comparatively small number of prostitutes who are isolated in continental countries on account of disease is itself sufficiently striking to show that such methods cannot seriously affect the problem of venereal disease; nor does anyone suggest that there is less disease in such countries than there is in abolitionist countries. Yet Mr. Flexner does perhaps put his case too high; it would seem, even on the basis of his own statistics, that regulation does have some slight effect in the reduction of disease, though an effect far from commensurable with the numerous drawbacks of the method. Mr. Flexner gives an account of the methods of medical examination in Paris.

> All day long a dismal procession of groups of abandoned women file into the rudely equipped rooms in which two physicians ply their repellent task perfunctorily. A line is formed; with open jaws and protruding tongue they march rapidly past. The doctor uses one spatula for all, wiping it hastily on a soiled towel from time to time. This finished, the same group in quick succession ascends two surgical chairs to permit a cursory vaginal inspection. ..... Of the two physicians employed on the occasion of one of my visits, one used a rubber glove, the other a rubber finger—in both cases the same for all; though wiped on a towel from time to time, neither was changed or cleansed. On one occasion I observed one of the physicians examine 25 or 30 girls without changing, washing, or wiping the rubber fingers he wore; and a number of those examined were adjudged "diseased." ..... The inspections consumed from 15 to 30 seconds each.

At Paris, moreover, the registered woman has no legal rights and is entirely in the hands of the police. On a complaint being made by a "morals patrolman" against her, the police inspector himself pronounces sentence, nor is she allowed an attorney to defend her or witnesses to attest her innocence of the alleged offence; and she has no appeal to any regularly constituted court of justice. Regulation inevitably tends to keep women in the business who might otherwise escape from it. For prostitution is not, as commonly supposed, a permanent trade. Its *personnel* changes quickly from year to year. Girls go in at a certain age, and after a time drift into other employments—become

servants, factory girls, waitresses, or sometimes marry. It is a "blind alley" occupation, in the sense that profits rapidly fall off after a certain age, and in London there seem to be few who persist to the last stage. Still, alas, we have all seen them worn and decrepit at the corners of shabby streets, eking out a miserable and precarious livelihood by selling themselves for pence.

Social, Economic and Medical Aspects.

The day of regulation is over, as anything like a general policy, despite the salutary effects that might follow upon it, if very carefully worked in special communities. Now the social problem in the matter of prostitution is to decide what particular type of so-called abolition shall be preferred, and how far the police shall interfere with the prostitute. Indiscriminate and absolute repression is impossible both in practice and in theory. The police cannot afford to make a mistake: public opinion will not for a moment tolerate the arrest of a woman as a prostitute who turns out after all not to be a prostitute. Since the police cannot take action, even on strong suspicion, it is obvious that a very large proportion of the women must be beyond their reach. Public opinion, moreover, will not permit any class to be harried to more than a certain extent. The existence of a huge and vehement demand among men is a fact which no one questions; and so long as this demand exists, there will remain an element in public sentiment which will safeguard the continued existence of prostitution, though its threefold evils—the social, the economic, and the medical—are manifest.

The social evil has been more or less outlined above; it centres about the ruined lives of numberless young women who are condemned to an existence of servitude and degradation. But here we must rigorously resist sentimentalism, while not withholding pity. We must estimate what many of them have lost in losing their virtue. It must be remembered that these women, mostly drawn from the lowest classes, would in the majority of cases lead lives of little attraction in any circumstances. The hard and unremitting toil of their normal lives does not offer any great advantage over the degradation of their adopted lives; they are in any case the unfortunates of society, condemned to the dirty work which others more fortunate can avoid. Nor is the moral degradation so complete as is commonly supposed. The charity of prostitutes towards one another is famous; they are capable of falling recklessly in love, though often with the most infamous of men; and no one susceptible of the highest passion of love can be held to be altogether corrupt or abandoned.

On the economic side the evil of prostitution consists in the removal from productive employment of a large number of active-bodied females. The economic argument assumes that the services rendered by prostitutes to society, and so heavily paid for by society, yield back nothing. That this is the case appears patent to all who are in the ignorantly ethical state of mind to which allusion has been made. The physiologist and sociologist are likely to hesitate long before expressing a decided opinion. A nation of "virgin" men may or may not be superior to a more ordinary nation; we have no evidence to found an induction upon. We know, however, that all the greatest and most successful and virile nations of the world support large armies of prostitutes; and we know from the law of natural selection that the organic structures, whether of an individual or of a society, are evolved to fulfil some vital need, however little we may perceive the nature of that need. If prostitution were a sheer drain on society, if the vast economic burden entailed by it upon society were balanced by no compensating circumstance, then every biological analogy suggests that all societies trafficking in prostitution must long ago have been wiped out by the ruthless operation of natural selection. We should expect to find that the successful nations were those free from the economic waste and the moral degradation involved by prostitution. But we find the opposite; and we shall perhaps see in this circumstance a reason to hesitate before we add to our condemnation of this unhappy class the charge of being utterly and uselessly parasitic upon the community.

The third evil of prostitution—the propagation of disease—is the one that strikes the public with the greatest force. We need not expatiate upon it in these columns. All medical men know its terrible realities, and rejoice to think that, although pathology is revealing to us an increasing range of the mischief, therapeutics, including, of course, prophylaxis, have made such strides that syphilis may succumb to medical attack long before any unwieldy instruments of social reorganisation can be brought into effective use.

There seems to be in the great centres of civilisation a slight decline in prostitution, while in our own country it is commonly accepted that in all the better classes of society morals are somewhat looser than they were in the Victorian age. The wider general knowledge of preventives of conception would probably tend to this result, and may account for the alleged decline of prostitution; the demands of men, being met to a larger extent by society at large, become less dependent on a specialised class. And Government suppression of that class might accelerate the progress of the modern tendencies. If these observations are speculative they indicate at all events the fact that long study and thought have still to be spent on the subject by the scientific sociologist before it is ripe to be handed back to the active propagandism of reformers and politicians.

Works on Sex Problems.

The "Questions of Sex" series, issued by the National Council of Public Morals, is admirably adapted to the purpose which the council has in view. Dr. Mary Scharlieb[3] deals with the subject on conventional lines, and her book may confidently be recommended to all young people who require information, supplied in good taste and not too much of it, on the subject of sex. Mr. Walter Heape's book[4] is admirably written and should be widely read; it is the production of an experienced man of the world. Mr. Heape holds up the banner of morality with dignity, ardour, and conviction; his book is precisely adapted to the requirements of those to whom it is addressed. Yet we seem to read occasionally between the lines that the author knows much more and would like to have said much more than could fittingly be introduced into such a book as the present. He appears at times to be somewhat cramped by his platform: a writer who might well make important

[3] What it Means to Marry; or Young Women and Marriage. By Dr. Mary Scharlieb. London: Cassell and Co. 1914. Pp. 140. 2s. 6d. net.

[4] Preparation for Marriage. By Walter Heape, M.A., F.R.S. London: Cassell and Co. 1914. Pp. 168. 2s. 6d. net.

contributions to the sociological and ethical aspects of the sex problem is necessarily writing below his full strength when he produces text-books of information for young people. The National Council of Public Morals are fortunate in having secured his services; few modern writers appear so well equipped to raise the subject of sex-relationship from the sphere of blind ethics to that of an inductive science. Setting aside theories, the problem centres round the following fact: that on the continent all men, and in this country a very large number of men, indulge in promiscuous intercourse at some period of their lives. Unmarried women, on the other hand, are divided into two profoundly distinct classes, one of which is brutalised by venal excess and the other condemned to total abstinence—a condition which Mr. Heape regards as pathological and even dangerous to society. When once this problem has been removed from the sphere of ignorant bigotry, and can be discussed (as in the books now under review) in a spirit of true knowledge and philosophic calm, it may still be possible to escape from the disharmony which has for so many ages divided and weakened civilised societies.

A recent addition to the Contemporary Science Series, written by Professor Robert Michels,[5] professor of political economy and statistics at Basle, and an honorary professor of law in the University of Turin, deals freely and rather romantically with many of the problems of sex as they present themselves conjugally and preconjugally. The book is readable, and the illustrative cases are frequently drawn from the works of well-known poets and novelists. The aim of the author, in his own words, is to provide "a meeting-place of a small group of selected and important problems which press themselves upon our attention and urgently demand solution." He groups the problems under the following headings—(1) General Borderland Problems of the Erotic Life; (2) Borderland Problems of the Extraconjugal Erotic Life; (3) Preconjugal Borderland Problems; and (4) Borderland Problems of the Conjugal Sexual Life, and states them, without furnishing dogmatic replies. The scientific attitude of the work is not insisted upon, but it is unsuitable for anything like general circulation.

The work of Dr. Magnus Hirschfeld[6] on homosexuality provides scope for reflection to those who call, with little knowledge, for the suppression of prostitution. Dr. Hirschfeld seems to us greatly to exaggerate the extent to which sexual perversion prevails in modern society, but he has himself seen so much that his knowledge must be received with respect. Still, where statistics are entirely and inevitably wanting, there must ever be a tendency to generalise too hastily from the cases brought before the specialist. The prevailing opinion seems to be that this particular sort of crime among men is rare in this country. Among women, where the offence is not illegal, it is currently reported to be somewhat common among the luxurious and idle classes, and the scandal of London bandies freely the names of those in high strata of society said to be thus addicted. The distribution of such nauseous talk has been, and is, in the highest degree mischievous.

[5] Sexual Ethics: A Study of Borderland Questions. By Robert Michels. London: Walter Scott Publishing Company, Limited. 1914. Pp. 296. 6s. net.

[6] Die Homosexualität des Mannes und des Weibes. Von Dr. med. Magnus Hirschfeld. Berlin: Louis Marcus Verlagsbuchhandlung. 1914. Pp. 1068. 12 marks.

PUBLIC HEALTH OF LONDON IN 1912.

(*Concluded from p. 1139.*)

PART II.—EDUCATION.

THE decree of the London County Council combining under one head the central public health administration, the school medical service, and the arrangements for the medical treatment of defectives has, as already seen, involved the complete reconstruction of the public health department. From the report before us it will be realised, not only that much has been already accomplished in this direction, but that more remains to be done, the changes therein detailed merely indicating the progress made up to the end of 1912.

Medical Inspection.

Section 13 of the Education Act of 1907, having imposed upon local authorities the responsibility of providing for the medical inspection of all children on admission to school, the need for coördination of the inspection and treatment of school children at once became manifest. This section gave power to make provision for preserving the health and physical welfare of the children. As regards inspection a beginning had already been made in 1889, when the late School Board appointed a part-time medical officer to advise them on medical matters generally and particularly as to the examination of candidates for permanent school appointments. When, in 1904, the County Council assumed control of the work previously carried out by the board, the school medical staff consisted of a medical officer and four assistants. There were also six oculists and six ringworm nurses. As illustrating the growth of this work in recent years, it may be mentioned that whilst in the year 1907 the number of children examined was 20,000 (of whom 6200 urgently needed treatment), in the year 1912 nearly 260,000 were examined, and treatment was actually administered to 28,000. In the early part of the latter year the work of inspection in London was performed by 64 quarter-time, 8 half-time, and 6 full-time doctors; and, later in that year, by 30 full-time and 4 quarter-time doctors, acting under the direction of 4 divisional medical officers—the doctors being assisted in their work by a staff of 90 nurses. The regulations of the Board of Education require the examination of all children on entering school life, and of children reaching school-leaving age. In addition to this the London County Council have arranged for the examination of children of 8 or 9 years old, and in urgent or special cases at other ages also. At the time of examination the children are weighed and measured, and careful note is taken of their clothing, cleanliness, nutrition, and condition of teeth. Reference to a table in the appendix shows that 36 per cent. of the children examined in the year under review were regarded as requiring medical treatment, whilst in the special class of children the percentage was 64. Of the children examined, 10 per cent. were found with enlarged tonsils, 6 per cent. with adenoids, and 5·4 per cent. with enlarged glands. Early phthisis was detected in 0·31 per cent. of the children, and other forms of tuberculosis in varying proportions. Diseases of the heart were present in 2·3 per cent., and diseases of the lungs (other than phthisis) in 3·2 per cent. of the total. 1·69 per cent. of the children were noted as the subjects of rickets, and 1·59 per cent. as being deformed—bow-legs, talipes, and chest malformations being common among younger children, and spinal curvatures among their elders, many of these defects being due to rickets.

Promotion of Cleanliness.

A scheme was devised in 1905 for dealing with the general condition of school children, the promotion of cleanliness, and the control of infectious disease amongst them. To carry out this work a permanent half-time assistant and 20 quarter-time temporary assistants were appointed in place of the six oculists. For dealing with ringworm and securing personal cleanliness a superintendent and 26 nurses were added to the staff.

Medical Treatment.

When the detailed inspection of school children was undertaken early in 1909 a further increase of the medical staff was found necessary, and at the end of that year 56 men and 12 women were employed by the Council. About

this time the inadequacy of existing arrangements for medical treatment was brought into prominence. As the result of inspection the number of school children attending hospital became so great that many of the larger institutions were compelled to limit the number of their attendances on any one day. In these circumstances the Council found it necessary to devise a scheme for the more efficient coördination of inspection and treatment, and especially for increasing facilities for the latter. In the present report the story of the growth of this scheme is briefly related, but it deserves mention here that, beginning in 1910 by agreement with six hospitals, the Council had by the end of 1912 completed arrangements with 11 hospitals and 17 "treatment centres" for dealing with 54,208 children suffering from diseases of the eye, nose, and throat, or else from ringworm or from minor ailments. The proposal to include hospitals in the Council's scheme met with much criticism. It appears, however, to have been the intention of those responsible for the Act of 1907 that all voluntary agencies for treatment of the sick should be propitiated, and this view is held by the Board of Education, who advise that before the direct treatment of ailments is undertaken by the education authority out of the rates advantage should be taken of existing institutions. As the result of full inquiry and consultation with the Board the Council were convinced that the London hospitals fill, and must continue to fill, an important place in any arrangement for the treatment of school children.

Medical Treatment Centres.

The Council have supplemented their hospital arrangements by entering into agreements with committees of local practitioners for the treatment of certain ailments at "medical treatment centres." The first of these was established tentatively at Hampstead in 1910, but was soon discontinued; a second was opened at Norwood and a third at Wandsworth. Subsequently the Council proposed to extend the system generally, but the Board of Education objected unless important modifications were agreed to. After several conferences the Board ultimately sanctioned the Council's scheme. Consequently the hope is now entertained that in the near future every district remote from hospitals will in this way be provided for. Recently effected agreements with nursing associations have been the means of providing for the treatment of discharging ears and other ailments requiring the services of a skilled nurse.

"Following Up" by Children's Care Committees.

In connexion with the feeding of necessitous children care committees were established in 1907, their functions having since been extended to include provision for "following up" by medical treatment, home visiting, and after-care. The following-up arrangements have been further improved by the assignment to each child of a special card which is kept at the school, and upon which the doctors enter particulars of defects or ailments and of the treatment prescribed. By this method each case is kept under observation until discharge. A large number of examinations of older children ("leavers") are carried out, and a leaflet has been distributed to their parents showing the disability, from a medical point of view, attaching to certain industrial employments. The "healthy hints" pamphlet has been revised, and sections have been added dealing with the care of teeth, discharging ears, and ringworm.

Cleansing Verminous Children.

At the end of the year under notice 22 nurses were engaged in securing the cleanliness of children and the treatment of ringworm. Out of 630,000 children examined, the heads or bodies were verminous in 24,000 instances; 10,000 children were cleansed by the Council's servants, and a similar number by the parents. From the foregoing it will be seen that effort is being steadily directed towards coördination of inspection and treatment, and that considerable progress has been made in developing a uniform scheme.

Fleas and Infectious Disease.

In the report for 1911 the question is discussed of the seasonal prevalence of three particular kinds of vermin—fleas, lice, and bugs. The high autumnal level of the flea and bug curves suggests comparison with the curves of diseases that have an autumnal prevalence. The mode of spread of infectious diseases is by no means completely understood, and the possibility of biting insects acting as carriers of infection cannot be ignored. In the present report this subject is further discussed, particulars having been obtained of the seasonal prevalence of fleas among the frequenters of common lodging-houses and also amongst elementary school children. These data have been represented in a diagram in which the proportions of flea-marked children in the last quarter of 1912 have been plotted out.

Control of Infectious Disease in Schools.

The rules for the guidance of teachers in dealing with infectious diseases in schools or in the children's homes have recently been revised.

Diphtheria and scarlet fever.—Both patients and contacts are now required to remain away from school until the expiration of a fortnight from the date of the disinfection of the premises after either of these diseases. The close association of scarlet fever and diphtheria in certain schools has again been observed in the year under notice. It is important to note that the persistence of the two diseases in the affected schools was maintained in spite of the careful exercise of preventive measures, including, in the case of diphtheria, the carrying out of bacteriological examinations and the exclusion of possible carriers of pathogenic bacilli. The facts already known clearly indicate that the question of the association of these diseases needs further study. The discovery of carrier cases of disease has caused much perplexity in sanitary administration. It is not possible, for instance, to affirm the presence of actual diphtheria in cases where definite clinical symptoms are absent, nor can it be maintained that persons harbouring diphtheria bacilli without outward manifestations of the disease are in every case dangerously infectious. Consequently such cases are excluded from the scope of the London Public Health Act of 1891. A rigid policy of exclusion from school is consistently adopted in such cases, as far as children are concerned, but the problem of dealing effectually with cases outside the jurisdiction of the education authority still remains to be solved.

Measles.—The new rules require that children who had been in contact with cases of measles at home and had not previously suffered from the disease should be excluded from school until the expiration of at least a fortnight from the commencement of the last case in the house. Measles and German measles are now dealt with separately.

Whooping-cough and chicken-pox.—The exclusion period for "contacts" has been altered to three weeks instead of two weeks as formerly, and for unprotected children the period must be calculated from the onset of illness of the last case in the house instead of the first.

Sore-throat.—All cases of sore-throat of whatever description are now required to be excluded from school.

Ringworm.—The rule has now been withdrawn under which children suffering from ringworm elsewhere than on the scalp were formerly allowed to attend school.

Care of the Teeth.

In order that the utmost benefit might be derived from Dr. R. A. Kirby's generous offer to provide for one year dental treatment free of cost at St. George's Dispensary, a scheme was devised by the council in 1910 from which the existing organisation for general dental treatment has been developed; consequently St. George's Dispensary has become one of the most popular of the centres for these cases. The appointment of dental inspectors to obtain the necessary attendance of defective children has been of great benefit, inasmuch as the purely medical inspection does not cover the age group of children amongst whom cases for conservative treatment are chiefly to be found. In addition to their routine work much of the dental inspectors' time is devoted to advising and securing the coöperation of parents in regard to the state of the teeth of their children.

Government Grant in Aid.

The State has now recognised the claim of local authorities for grants towards the expenses of medical treatment of school children, and a sum of £60,000 has been placed on the Education Estimates for the purpose. The amount actually expended during the year under notice for the work carried out in London in respect of the medical and surgical treatment of children attending elementary schools, and of work ancillary to such treatment, was returned as £12,958.

THE REORGANISATION OF THE SCHOOL MEDICAL STAFF IN LONDON.

IN order to meet the view of the Board of Education that the efficiency of the school medical service may suffer unless more variety is introduced into the work of school medical officers, and to comply with a suggestion that in certain respects the arrangements for medical inspection were capable of improvement,[1] the London County Council has decided to divide the county into five districts instead of four, the staff of each division to be under the control of a divisional officer and to consist of a nucleus of permanent medical assistants, the remainder of the staff consisting partly of full-time temporary medical assistants appointed for three years only and partly of temporary part-time medical inspectors. The Board of Education suggested that the duties of the permanent officers might be extended to include further examination of visual defects, public health work, including investigations of infectious diseases in schools, medical inspection of children in secondary schools, scholarship candidates, &c., work in connexion with special schools, research and laboratory work, and some share in the working of the administrative arrangements. Furthermore, in order to earn the full 50 per cent. grant towards the cost of medical inspection and treatment, the Board requires that provision should be made for completing the scheme of re-inspection of children found defective, including the continuous observation of tuberculous children, for special examinations in connexion with visual and aural defects and cases requiring nursing treatment, and for more complete control of outbreaks of infectious disease.

The Education Committee proposed that, as from April 1st, 1914, there should be five divisional medical officers at a commencing salary of £500 a year, rising by annual increments of £25 to £600; 15 full-time permanent medical assistants (three in each district) at salaries commencing at £400 a year and rising by annual increments of £25 to £500 a year; 20 full-time temporary medical assistants at salaries of £400 a year; and 18 quarter-time school doctors at salaries of £132 a year. The last two classes were only to be appointed for a period of three years. The cost of the increases of staff would be £6083 in 1914–15 and £7271 a year ultimately. The Council on March 24th approved appointments and re-arrangements of the school medical staff in order to fill the positions indicated above, and resolved:—

(*a*) That Mr. J. G. Forbes, Mr. A. W. Sikes, and Mr. F. W. Higgs, medical assistants in the public health department, be designated "divisional medical officers."

(*b*) That Mr. F. C. Lewis (£450), a medical assistant in the public health department, be promoted to be a divisional medical officer at the commencing salary of £500 a year, rising by annual increments of £25 to £600 a year.

(*c*) That the salary (£400 a year since September, 1913) of Mr. T. J. T. McHattie, a medical assistant in the public health department, be increased to £425 a year.

(*d*) That Dr. A. R. Cowell, Dr. H. F. Marris, Dr. R. H. Norman, Dr. W. J. M. Slowan, and Dr. A. G. Wells be appointed medical assistants in the public health department, each at a commencing salary of £425 a year; Mr. L. R. Tosswill, Dr. Mabel Russell, and Dr. F. T. H. Wood to be medical assistants, each at a commencing salary of £400 a year, rising in both instances by £25 a year to £500 a year.

(*e*) That the services of Miss Ruth Balmer, Mr. E. J. Boome, Mr. Cresswell Burrows, Mr. A. M. Davies, Miss J. G. Duncan, Miss M. G. Edis, Miss M. C. Macdonald, Miss E. M. McVail, Mr. E. P. Palgrave, and Mr. O. H. Peters be temporarily retained for a period not exceeding three years as medical assistants in the public health department, each at a salary at the rate of £400 a year.

(*f*) That the services of Dr. C. F. Hadfield, Miss Rose Jordan, Dr. F. S. Langmead, Mr. E. J. Morton, Mr. E. B. Smith, and Dr. Oliver K. Williamson be retained for a period not exceeding two years as quarter-time school doctors, each at a salary at the rate of £132 a year.

Permission has been given for the school organisation to be used in connexion with investigations which Mrs. Frances Wood desires to carry out in certain schools with the object of ascertaining whether there was any corrélation between the home environment of a child and its mental ability and physical characteristics. The work is to be carried out in the statistical laboratory of the Lister Institute of Preventive Medicine under the direction of Mr. Major Greenwood, jun.

[1] THE LANCET, August 2nd, 1913, p. 339.

Public Health.

ANNUAL REPORTS OF MEDICAL OFFICERS OF HEALTH.

County of Durham.—Dr. T. Eustace Hill's last annual report contains as usual a variety of interesting information. The shire of Durham, which includes a large mining population, continues to increase the number of its inhabitants, which is now estimated at about 952,000. In 1912 the number of births was 29,671 and the deaths 13,111, giving a "natural increase" of births over deaths of 16,560. It is true that the birth-rate shows a tendency to fall—for 1912 it was 31·2, as compared with 36·9 in 1891–5—and that, notwithstanding a steady simultaneous fall in the general death-rate, the proportionate "natural increase" is now somewhat less than formerly; but even on present figures the Durham rate, if it obtained throughout the country, would occasion serious problems of over-population. The county has an excess of males: 100 to every 95·5 females, as against 106·8 females in the case of England and Wales; the preponderance is notable at all ages after 15, and no doubt signifies a large amount of female emigration as well as of male immigration. A relatively high infant mortality rate accompanies the high birth-rate, but this also has fallen conspicuously in recent years, and for 1912 was no higher than 106 per 1000 births, as compared with 95 per 1000 for England and Wales. The rural districts of Durham have a higher infant death-rate than the urban; but it has to be remembered that many of the so-called rural districts contain large aggregations of population living under urban conditions. Last year the adoption of the Notification of Births Act was made obligatory all over the county at the instance of the county council, but in the period reviewed in this report this Act was operative in six districts only. For these districts the county council appointed and maintained health visitors and nurses, and the complete scheme now contemplated will entail the appointment of 40 such visitors, on the basis of 1 to every 25,000 persons. It is proposed that the health visitors should also undertake the duties of visiting persons suffering from tuberculosis and of following up school children ascertained to be suffering from physical defects requiring attention or treatment. A notable decline has taken place in the mortality from, and prevalence of, enteric fever, in regard to which the county of Durham formerly had an unenviable pre-eminence. This must in large measure be attributed to progress in the matter of sewage and improved water-supplies, and the efforts which have been made to abolish the insalubrious middens which are so characteristic of many of the towns and villages in the county. Progress, though slow, is being made in replacing by properly constructed covered drains the objectionable open channels which are so frequently used in the colliery villages for the conveyance of slop-water and waste-water, while in Stockton and other places the local authorities have at length decided on an active policy of systematic conversion of midden privies to water closets. Much, however, has still to be done to mitigate the nuisances caused by the insanitary practice of depositing house refuse and midden contents on the footpaths and roadways to await the uncertain arrival of the scavengers' carts, to get the roads in new neighbourhoods properly made up, and generally to prevent the numerous causes of soil pollution which obtain in the mining villages and elsewhere. It is to the credit of the county council and its medical officer of health that in Durham a very active policy has been pursued for many years in regard to the improvement of housing conditions. Dr. Hill gives some specimens of useful forms for recording the results of inspection of working-class property, and shows that as a whole the various districts in the county have substantial housing improvements to their credit. The report gives a detailed account of a long-standing dispute between the county authorities and the district council of Benfieldside on the question whether the old type of miner's cottage can be made reasonably fit for human habitation by any method short of rebuilding the upper storey and raising the roof. The Local Government Board, as a result of a test case, endorsed the county view that the raising of the roofs so that the upper rooms have an average height of 8 feet would be desirable, but was unable to rule out alternative improvements, such as the provision of dormer windows and

fireplaces, which did not necessitate so large a reconstruction. Dr. Hill considers this decision disappointing, and liable to have a retrograde effect. The county appointed a tuberculosis officer in November, 1912; dispensaries have been organised for tuberculosis, and various arrangements made to obtain beds in existing sanatoriums. The county arrangements with the Durham University College of Medicine for the examination of specimens for evidence of diphtheria, enteric fever, and tuberculosis have been augmented. The privilege of sending such specimens and receiving reports free of charge extends to all medical practitioners practising in the county.

County of Radnor.—Dr. L. W. Pole refers to the steps taken by the Welsh National Memorial to provide treatment for cases of tuberculosis in Wales and to the want of sufficient interrelation between the work of the Memorial and that required of public health authorities. Up to the present, Dr. Pole states, the amount of coöperation between county council officials and those of the Memorial Association has been insignificant. The time has come, he considers, for the county officer to be fully informed as to all work done in the county by the Memorial physicians. On the other hand, sanitary authorities ought to coöperate with the Memorial authorities and bring to light conditions which promote the spread of tuberculosis, especially in the matter of inspection of premises and action to deal with dampness of dwellings, want of ventilation, insufficient cubic space, and overcrowding. The housing difficulty in many parts of this county appears to be acute, and houses quite unfit for habitation cannot be closed on account of the difficulty of finding any accommodation for the families displaced. Dr. Pole represents to the county council the importance of their county medical officer of health having more time and greater facilities for investigation of housing conditions.

Urban and Port Sanitary District of Barry.—If confidence may be placed in the examinations of cows made by the dairy cows inspector in Barry this town is exceptionally free from tuberculous milk due to mammary tuberculosis. During the whole of 1913 only one case of tuberculosis of the udder was found in the course of 168 visits to cowsheds in which 1700 cows were examined. Catarrhal mammitis and various forms of udder disease, on the other hand, were frequently found, and in the case of 61 cows total or partial prohibition of the use of the milk was ordered on this account. In the slaughter-houses cows were found affected by tuberculosis to the extent of 12 per cent., steers and heifers 1·5 per cent., and pigs 1 per cent. From 200 lb. to 1000 lb. weight of tuberculous meat was condemned and destroyed each month during 1913. In view of the possibility of plague being imported by rats on grain ships and other ships arriving from suspected ports, special measures have been continued to deal with these rodents, and it is considered that the number of rats on dock premises is being diminished year by year. The medical officer of health of this district and port, Mr. G. Neale, gives special attention to the inspection of shipping, and the practice is followed of inspecting vessels immediately on their arrival, so that notices and orders as to cleansing and sanitary repairs can be executed as far as possible before the ship departs for another port. The difficulty of maintaining cleanly conditions in the living quarters of ships is specially great where, as is usually the case at Barry, the ships are employed in the coal trade. These ships frequently bring large cargoes of pit wood, which is often piled on the decks so as to obstruct the approach, ventilation, and lighting of the forecastle, in which the firemen and sailors are usually housed. When regard is had to the deficient air space, light, and ventilation of the forecastle sleeping quarters in ordinary circumstances, it seems highly undesirable that these deficiencies should be increased by the apparently unnecessary practice to which Mr. Neale here directs attention.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN the 97 English and Welsh towns with populations exceeding 50,000 persons at the last Census and whose aggregate population at the middle of this year is estimated at 18,120,059 persons, 7853 births and 5212 deaths were registered during the week ended Saturday, April 11th. The annual rate of mortality in these towns, which had been 15·2, 16·5, and 16·2 per 1000 in the three preceding weeks, further declined to 15·0 per 1000 in the week under notice. During the 13 weeks of last quarter the mean annual death-rate in these towns averaged 16·4, against 16·1 per 1000 in London during the same period. Among the several towns the death-rate in the week under review ranged from 6·3 in Ilford, 8·9 in Croydon, 9·1 in Devonport, 9·2 in Coventry, and 9·3 in East Ham and in Reading, to 20·6 in Middlesbrough, 21·0 in Gateshead, 21·3 in Barnsley, 22·7 in Rochdale, and 24·2 in Burnley.

The 5212 deaths from all causes were 418 fewer than the number in the previous week, and included 433 which were referred to the principal epidemic diseases, against 488 and 484 in the two preceding weeks. Of these 433 deaths, 150 resulted from whooping-cough, 134 from measles, 54 from infantile diarrhœal diseases, 44 from diphtheria, 39 from scarlet fever, and 12 from enteric fever, but not one from small-pox. The mean annual death-rate from these diseases was equal to 1·2, against 1·4 per 1000 in each of the two preceding weeks. The deaths attributed to whooping-cough, which had steadily increased from 110 to 172 in the seven preceding weeks, fell to 150, and caused the highest annual death-rates of 1·6 in Middlesbrough, 1·7 in Exeter, 1·8 in Darlington, 2·2 in Rochdale, and 2·6 in Swansea. The deaths referred to measles, which had been 107, 140, and 137 in the three preceding weeks, further decreased to 134; the highest death-rates from this disease were 1·3 in Bradford, 1·6 in Leicester, 1·8 in Stockton-on-Tees, 1·9 in Barnsley, 2·1 in Middlesbrough and in Swansea, and 2·9 in Nottingham. The fatal cases of diarrhœa and enteritis (among infants under 2 years), which had been 73, 65, and 77 in the three preceding weeks, declined to 54, of which 13 were registered in London, 5 in Birmingham, 4 in Swansea, and 3 in West Ham. The deaths attributed to diphtheria, which had been 51, 73, and 51 in the three preceding weeks, further fell to 44, and included 9 in London, 3 in Birmingham, and 2 each in Wimbledon, Devonport, Liverpool, Bolton, Newport, (Mon.), and Cardiff. The deaths referred to scarlet fever, which had been 37, 33, and 35 in the three preceding weeks, further rose to 39; 5 deaths occurred in Birmingham, 4 in Manchester, 4 in Sheffield, and 3 in Salford. The fatal cases of enteric fever, which had been 21, 15, and 12 in the three preceding weeks, were again 12 in the week under notice, but showed no excess in any of the towns.

The number of scarlet fever patients under treatment in the London Fever and the Metropolitan Asylums Hospitals, which had been 3173, 3143, and 3182 at the end of the three preceding weeks, had declined to 3068 on Saturday, April 11th: 306 new cases were admitted during the week, against 319, 347, and 399 in the three preceding weeks. These hospitals also contained on Saturday, April 11th, 1245 cases of diphtheria, 360 of whooping-cough, 123 of measles, and 63 of enteric fever, but not one of small-pox. The 1170 deaths from all causes in London were 174 fewer than the number registered in the previous week, and were equal to an annual death-rate of 13·5 per 1000. The deaths referred to diseases of the respiratory system, which had been 250, 291, and 280 in the three preceding weeks, further declined to 219 in the week under notice, and were 128 below the number recorded in the corresponding week of last year.

Of the 5212 deaths from all causes in the 97 towns, 173 resulted from various forms of violence, and 371 were the subject of coroners' inquests, while 1406 occurred in public institutions. The causes of 32, or 0·6 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified in Manchester, Sheffield, Leeds, Bristol, West Ham, Bradford, Hull, and in 75 other smaller towns. Of the 32 uncertified causes, 8 were recorded in Birmingham, 4 in Liverpool, 3 in St. Helens, and 2 each in Bury, Preston, Huddersfield, South Shields, and Merthyr Tydfil.

In the 97 English and Welsh towns 8946 births and 5192 deaths were registered during the week ended Saturday, April 18th. The annual rate of mortality in these towns, which had been 16·5, 16·2, and 15·0 per 1000 in the three preceding weeks, further fell to 14·9 per 1000 in the week under notice. Among the several towns the death-rate ranged from 6·0 in Enfield, 6·4 in Hornsey, 6·9 in Wakefield, 7·3 in Edmonton, and 7·4 in Ilford, to 21·6 in Gloucester, 22·2 in Barnsley, 24·3 in Rochdale, 25·5 in Stockton-on-Tees, and 29·1 in Dudley.

The 5192 deaths from all causes were 20 fewer than the number in the previous week, and included 438 which were referred to the principal epidemic diseases, against numbers declining from 488 to 433 in the three preceding weeks. Of these 438 deaths, 153 resulted from measles, 117 from whooping-cough, 61 from infantile diarrhœal diseases, 50 from diphtheria, 40 from scarlet fever, and 17 from enteric fever, but not one from small-pox. The mean annual death-rate from these diseases last week was equal to 1·3, against 1·4 and 1·2 per 1000 in the two preceding weeks. The deaths attributed to measles, which had been 140, 137, and

134 in the three preceding weeks, rose to 153 last week, and caused the highest highest annual death-rates of 2·3 in Nottingham and in Sheffield, 2·6 in Swansea, 2·8 in Bootle, 3·0 in Dudley, and 3·5 in Stockton-on-Tees. The deaths referred to whooping-cough, which had been 162, 172, and 150 in the three preceding weeks, further fell to 117 last week; of this number 26 occurred in London, 10 in Manchester, 7 in Birmingham, 6 in Sheffield, 6 in Swansea, 5 in Liverpool, and 4 each in West Ham, Leicester, and Bradford. The fatal cases of diarrhœa and enteritis (among infants under 2 years), which had been 65, 77, and 54 in the three preceding weeks, rose to 61 last week, and included 15 in London, 5 in Liverpool, 5 in Manchester, 4 in Birmingham, and 3 in Sheffield. The deaths attributed to diphtheria, which had been 73, 51, and 44 in the three preceding weeks, rose to 50 last week, of which 11 were registered in London, 3 in Bolton, 3 in Sheffield, 2 in Birmingham, and 2 in Liverpool. The deaths referred to scarlet fever, which had been 33, 35, and 39 in the three preceding weeks, were 40 last week; 7 deaths were recorded in London, 5 in Liverpool, 4 in Birmingham, 4 in Manchester, and 3 in Leeds. The fatal cases of enteric fever, which had been 12 in each of the two preceding weeks, rose to 17 last week, and included 3 in London and 2 each in Liverpool, Salford, and Sheffield.

The number of scarlet fever patients under treatment in the London Fever and the Metropolitan Asylums Hospitals, which had been 3143, 3182, and 3068 at the end of the three preceding weeks, had further declined to 2992 on Saturday last; 289 new cases were admitted during the week, against 347, 399, and 306 in the three preceding weeks. These hospitals also contained on Saturday last 1186 cases of diphtheria, 355 of whooping-cough, 115 of measles, and 68 of enteric fever, but not one of small-pox. The 1265 deaths from all causes in London were 85 in excess of the number in the previous week, and corresponded to an annual death-rate of 14·5 per 1000. The deaths referred to diseases of the respiratory system, which had been 291, 280, and 219 in the three preceding weeks, rose to 263 in the week under notice, but were 22 below the number registered in the corresponding week of last year.

Of the 5192 deaths from all causes in the 97 towns, 220 resulted from various forms of violence, and 439 were the subject of coroners' inquests, while 1478 occurred in public institutions. The causes of 44, or 0·8 per cent., of the total deaths were not certified either by a registered practitioner or by a coroner after inquest. All the causes of death were duly certified in London and in its 14 suburban districts, in Sheffield, Leeds, Bristol, Bradford, Hull, Newcastle-on-Tyne, and in 52 other smaller towns. Of the 44 uncertified causes of death, 7 were recorded in Birmingham, 7 in Liverpool, 4 in Stoke-on-Trent, and 2 each in Dudley, St. Helens, Southport, Preston, and Rotherham.

HEALTH OF SCOTCH TOWNS.

In the 16 largest Scotch towns with an aggregate population estimated at 2,293,200 persons at the middle of this year, 1140 births and 727 deaths were registered during the week ended Saturday, April 11th. The annual rate of mortality in these towns, which had been 16·6, 16·5, and 18·6 per 1000 in the three preceding weeks, declined to 16·5 per 1000 in the week under notice. During the 13 weeks of last quarter the mean annual death-rate in these Scotch towns averaged 18·2, against 16·4 per 1000 in the 97 large English towns. Among the several towns the death-rate in the week under review ranged from 11·0 in Falkirk, 11·8 in Leith, and 14·5 in Coatbridge, to 18·4 in Perth, 18·9 in Hamilton, and 24·1 in Kirkcaldy.

The 727 deaths from all causes were 92 fewer than the number in the previous week, and included 65 which were referred to the principal epidemic diseases, against numbers rising from 66 to 81 in the three preceding weeks. Of these 65 deaths, 31 resulted from measles, 12 from whooping-cough, 7 from diphtheria, 6 from scarlet fever, 5 from infantile diarrhœal diseases, and 4 from enteric fever, but not one from small-pox. The mean annual death-rate from these diseases was equal to 1·5, against 1·2 per 1000 in the 97 large English towns. The deaths attributed to measles, which had been 38, 34, and 37 in the three preceding weeks, fell to 31. Of this number 22 were registered in Glasgow, 6 in Edinburgh, and 2 in Hamilton. The deaths referred to whooping-cough, which had increased from 8 to 15 in the four preceding weeks, fell to 12, and included 4 in Glasgow, 2 in Aberdeen, 2 in Coatbridge, and 2 in Kirkcaldy. The fatal cases of diphtheria, which had been 6, 9, and 9 in the three preceding weeks, fell to 7, and comprised 3 in Glasgow, 3 in Aberdeen, and 1 in Motherwell. The 6 deaths attributed to scarlet fever, of which 3 occurred in Glasgow, were 2 below the weekly average in the preceding quarter. The deaths of infants (under 2 years) referred to diarrhœa and enteritis, which had been 14 in each of the two preceding weeks, fell to 5, of which 2 were registered in Dundee. Of the 4 fatal cases of enteric fever, 3 were recorded in Glasgow and 1 in Coatbridge.

The deaths referred to diseases of the respiratory system, which had been 117, 111, and 166 in the three preceding weeks, declined to 137 in the week under review; and 28 deaths resulted from various forms of violence, against numbers rising from 22 to 33 in the three preceding weeks.

HEALTH OF IRISH TOWNS.

In the 27 town districts of Ireland, with an aggregate population estimated at 1,205,280 persons at the middle of this year, 500 births and 470 deaths were registered during the week ended Saturday, April 11th. The annual rate of mortality in these towns, which had been 20·3, 22·8, and 21·7 per 1000 in the three preceding weeks, further fell to 20·3 per 1000 in the week under notice. During the 13 weeks of last quarter the mean annual death-rate in these towns averaged 21·5 per 1000; in the 97 large English towns the corresponding rate did not exceed 16·4, while in the 16 Scotch towns it was equal to 18·2 per 1000. The annual death-rate in the week under review was equal to 24·1 in Dublin (against 13·5 in London and 16·6 in Glasgow), 18·6 in Belfast, 19·7 in Cork, 22·8 in Londonderry, 16·2 in Limerick, and 11·4 in Waterford, while in the 21 smaller towns the mean death-rate was 18·1 per 1000.

The 470 deaths from all causes were 32 fewer than the number in the previous week, and included 63 which were referred to the principal epidemic diseases, against 67 and 48 in the two preceding weeks. Of these 63 deaths, 37 resulted from measles, 9 from whooping-cough, 8 from infantile diarrhœal diseases, 6 from scarlet fever, 2 from diphtheria, and 1 from enteric fever, but not one from small-pox. The mean annual death-rate from these diseases was equal to 2·7, against corresponding rates of 1·2 and 1·5 per 1000 in the English and Scotch towns respectively. The deaths attributed to measles, which had been 16, 34, and 26 in the three preceding weeks, rose to 37, of which 34 occurred in Dublin, 2 in Belfast, and 1 in Limerick. The deaths referred to whooping-cough, which had been 11, 12, and 10 in the three preceding weeks, were 9, and comprised 6 in Belfast, 2 in Dublin, and 1 in Cork. The fatal cases of diarrhœa and enteritis (among infants under 2 years), which had declined from 14 to 6 in the four preceding weeks, rose to 8, and included 4 in Belfast and 2 in Dublin. The 6 deaths attributed to scarlet fever, of which 3 occurred in Dublin and 3 in Belfast, were equal to the weekly average in the preceding quarter. Of the 2 deaths referred to diphtheria, 1 occurred in Dublin and 1 in Belfast; the fatal case of enteric fever was recorded in Dublin.

The deaths referred to diseases of the respiratory system, which had increased from 97 to 118 in the five preceding weeks, fell to 102 in the week under notice. Of the 470 deaths from all causes, 128, or 27 per cent., occurred in public institutions and 7 resulted from various forms of violence. The causes of 16, or 3·4 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; in the 97 large English towns the proportion of uncertified causes did not exceed 0·6 per cent.

In the 27 town districts of Ireland 623 births and 519 deaths were registered during the week ended Saturday, April 18th. The annual rate of mortality in these towns, which had been 22·8, 21·7, and 20·3 per 1000 in the three preceding weeks, rose to 22·5 per 1000 in the week under notice, against corresponding rates of 14·9 and 16·0 per 1000 in the English and Scotch towns respectively. The annual death-rate last week was equal to 26·1 in Dublin (against 14·5 in London and 16·5 in Glasgow), 21·2 in Belfast, 27·9 in Cork, 17·8 in Londonderry, 27·1 in Limerick, and 32·3 in Waterford; while in the 21 smaller towns the mean death-rate did not exceed 14·9 per 1000.

The 519 deaths from all causes were 49 in excess of the number in the previous week, and included 75 which were referred to the principal epidemic diseases, against 48 and 63 in the two preceding weeks. Of these 75 deaths, 42 resulted from measles, 14 from whooping-cough, 10 from infantile diarrhœal diseases, 5 from scarlet fever, 3 from enteric fever, and 1 from diphtheria, but not one from small-pox. The mean annual death-rate from these diseases was equal to 3·2 per 1000, against a corresponding rate of 1·3 per 1000 in the English towns. The deaths attributed to measles, which had been 34, 26, and 37 in the three preceding weeks, further rose to 42 last week, of which 39 occurred in Dublin, 2 in Belfast, and 1 in Lurgan. The deaths referred to whooping-cough, which had been 12, 10, and 9 in the three preceding weeks, rose to 14, and comprised 9 in Belfast, 4 in Dublin, and 1 in Cork. The fatal cases of diarrhœa and enteritis (among infants under two years), which had been 8, 6, and 8 in the three preceding weeks, rose to 10 last week, and included 7 in Dublin, 2 in Belfast, and 1 in Waterford. The 5 deaths attributed to scarlet fever, all of which occurred in Belfast, were equal to the average in the three preceding weeks. The fatal cases of enteric fever were recorded in Dublin, Cork, and Dundalk respectively, and that of diphtheria in Belfast.

The deaths referred to diseases of the respiratory system,

which had been 113, 118, and 102 in the three preceding weeks, rose to 115 in the week under notice. Of the 519 deaths from all causes, 154, or 30 per cent., occurred in public institutions, and 8 resulted from various forms of violence. The causes of 17, or 3·3 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; in the 97 large English towns the proportion of uncertified causes last week did not exceed 0·8 per cent.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE undermentioned Acting Surgeons have been confirmed in the rank of Surgeon in His Majesty's Fleet:—Percy Boyd Wallis (dated April 11th, 1913), and Arthur Richard Sharrod, John Stephen Elliot, Albert Joseph Tonkinson, Thomas John Kilbride, John Reid Haldane, Gerald Sylvester Harvey, John Phillips Blockley, William Hoare Murray, George Herbert Hayes, Henry Charles Aylmer Tandy Cannon, and Hugh James Hopps (dated Oct. 3rd, 1913).

The following appointments have been notified:—Staff-Surgeons: N. J. Roche and T. W. Jeffrey to the *Victory*, additional, for trials of the *Iris* and *Victor* respectively. Surgeon: C. F. O. Sankey to the *Dwarf*, on recommissioning. Acting Surgeons: A. E. Panter to the *Victory*, for course of instruction at Royal Medical School, R.N. College, Greenwich, and at Haslar Hospital; and F. C. Hunot, H. B. Parker, R. F. Quinton, M. J. Aitken, J. L. Priston, J. A. Maxwell, W. G. Thwaytes, M. S. Moore, W. F. Beattie, F. E. Fitzmaurice, C. E. Greeson, T. J. O'Riordan, J. C. Kelly, H. W. Fitzroy-Williams, T. Hill, J. M. Horan, and G. M. Graham to the *Victory*, for course of instruction.

ROYAL ARMY MEDICAL CORPS.

The undermentioned Lieutenant-Colonels are placed on retired pay: Francis H. M. Burton (dated April 20th, 1914); and Michael L. Hearn (dated April 21st, 1914).

Major Edward M. Morphew to be Lieutenant-Colonel, vice F. H. M. Burton, retired (dated April 20th, 1914). Major Nicholas Tyacke to be Lieutenant-Colonel, vice M. L. Hearn, retired (dated April 21st, 1914).

Colonel C. Birt has been appointed Assistant Director of Medical Services to the Bombay Brigade. Brevet Colonel S. Hickson has been appointed Inspector of Medical Services at the War Office.

Lieutenant-Colonel R. H. Hall has been selected to hold charge of Queen Alexandra's Military Hospital at Cosham. Lieutenant-Colonel G. G. Adams has been appointed to hold charge of the Military Hospital at Secunderabad Cantonment. Lieutenant-Colonel T. Daly has been appointed to command No. 19 Company of the Royal Army Medical Corps at Chester and Senior Medical Officer North-Western Coast Defences. Lieutenant-Colonel S. Guise Moores has been appointed to hold charge of the Military Hospital at Warley. Lieutenant-Colonel H. M. Adamson has been appointed to hold charge of the Military Hospital at Belgaum Cantonment. Lieutenant-Colonel A. L. F. Bate has been appointed Senior Recruiting Medical Officer at Woolwich. Lieutenant-Colonel T. G. Lavie has joined at Malta.

Major M. H. G. Fell has been selected to succeed Lieutenant-Colonel S. Guise Moores as Deputy Assistant Director of Medical Services to the Aldershot Command. Major J. G. Gill has been appointed to the Southern Command. Major W. R. Blackwell has taken up duty at the War Office as Deputy Director-General, Medical Division. Major F. E. Gunter has been appointed to the Military Hospital at Tidworth. Major E. W. Bliss, Major J. Matthews, Major G. J. A. Orms, and Major E. F. Q. L'Estrange have arrived home from India. Major L. Cotterill has joined at Nowshera Cantonment. Major A. G. Thompson has been appointed to the Southern Command for duty. Major E. Brodribb has been transferred from Malta to Scutari. Major L. Addams-Williams has been appointed to Karachi Cantonment. Major A. H. Safford has been transferred from Dublin to the Eastern Command. Major H. G. Pinches has been transferred from the Irish Command to the Chatham District. Major H. B. Fawcus has taken up duty as Instructor in Army Sanitation at the Depôt, Aldershot. Major G. H. Goddard has been placed in charge of the Military Hospital at Brighton. Major D. J. Collins has been appointed to hold charge of the Military Hospital at Kirkee Cantonment. Major C. E. Pollock has taken up duty in the Sierra Leone Protectorate. Major F. S. Penny has arrived home from Hong-Kong. Major D. E. Curme has been appointed to hold charge of the Military Hospital at Pontefract. Major R. W. Clements has arrived home for duty from Wellington. Major W. L. Baker has been appointed to the Recruiting Staff of the London District. Major H. C. R. Hime has been appointed Specialist in Ophthalmology to the Ninth (Secunderabad) Division of the Southern Army.

Captain S. Field has been appointed for duty in the Cork District. Captain M. J. Cromie has embarked for the Sierra Leone Protectorate. Captain A. H. T. Davis has been appointed Specialist in Radiography and Electrical Science to the Fourth (Poona) Division. Captain M. O. Wilson has been appointed to the Eastern Command. Captain T. B. Nicholls has been appointed to hold charge of the Military Hospital at Cyprus. Captain S. E. Lewis has taken over charge of the Military Families Hospital at Devonport. Captain E. G. R. Lithgow has been appointed Medical Officer to the Central Flying School at Upavon. Captain G. J. Keane has been appointed for special duty in Uganda under the Colonial Office. Captain A. H. Hayes has taken up duty as Staff Surgeon and in civil medical charge at Ambala Cantonment. Captain R. G. H. Tate has arrived home from India. Captain R. B. Hole has been appointed Adjutant at the Royal Army Medical Corps School of Instruction, Glasgow. Captain R. G. S. Gregg has taken up duty at Aden. Captain W. F. M. Loughnan has been appointed to the Eastern Command. Captain J. T. McEntire has been appointed to the Cork District for duty. Captain L. G. Gibson has been appointed to hold charge of the Military and Cantonment General Hospital at Amritsar. Captain C. E. L. Harding has joined at Aden. Captain H. O. M. Beadnell has been placed under orders for duty in Jamaica. Captain L. A. A. Andrews has been appointed Specialist in Dermatology and Venereal Diseases at the Military Hospital, York. Captain K. Comyn has been appointed to hold charge of the Pathological Laboratory at Gibraltar. Captain J. E. Hoar has joined at Sheerness. Captain A. M. Fraser has been appointed Specialist Sanitary Officer to the Garrison at Singapore. Captain J. R. Foster has been appointed to the Irish Command. Captain E. J. Elliott has been appointed to hold charge of the Military Hospital at Ashton. Captain S. M. W. Meadows has been appointed Specialist in Midwifery and Gynæcology at Tidworth. Captain H. C. Winkworth has embarked for India. Captain D. de C. O'Grady has been appointed to the Military Hospital at Chatham.

Lieutenant T. A. Watson has been appointed Specialist in Advanced Operative Surgery to the Eighth (Lucknow) Division. Lieutenant L. Buckley has been transferred from the Military Hospital at Rawal Pindi Cantonment to Ferozepore. Lieutenant W. W. O. Ball has been appointed for duty at Bordon Camp. Lieutenant H. Beddingfield has been transferred from Woolwich to Hounslow Barracks. Lieutenant H. S. Blackmore has been appointed to hold charge of the Bacteriological Research Laboratory at Brigade Headquarters, Bangalore Cantonment. Lieutenant S. P. Sykes has been transferred from Rawal Pindi to the Military Hospital at Jutogh. Lieutenant W. W. Pratt has embarked for India. Lieutenant T. E. Osmond has been appointed Specialist in Dermatology and Venereal Diseases to the Eighth (Lucknow) Division. Lieutenant H. J. G. Wells has been transferred from Nowshera to the Military Hospital at Rawal Pindi Cantonment.

INDIAN MEDICAL SERVICE.

The promotion of Major James Good to his present rank is antedated from June 28th, 1912, to Dec. 28th, 1911.

The King has approved the retirement of Colonel Robert Neil Campbell, C.B., C.I.E. (dated April 2nd, 1914).

Colonel C. C. Manifold has been granted six months' combined leave of absence home from India. Lieutenant-Colonel C. Milne has been transferred from Basti and appointed Civil Surgeon at Cawnpore. Lieutenant-Colonel P. Carr-White has been transferred from Kotah and appointed Residency Surgeon in Nepal State by the Foreign Department.

Major J. M. Wolley has been appointed to officiate as Superintendent of the Central Prison at Dacca. Major S. H. Lee-Abbott, Civil Surgeon at Ferozepore, has been granted two years' combined leave of absence home from India. Major J. W. D. Megaw, Civil Surgeon of Monghyr, has been appointed to officiate as Civil Surgeon at Cuttack. Major H. de Vere Condon has been appointed Agency Surgeon to the Native States of Kotah and Jhalawar. Major S. P. James, Assistant Director-General, has arrived home on leave of absence from India. Major W. S. Willmore has been appointed Civil Surgeon at Sitapur. Major E. A. C. Matthew has been appointed Honorary Surgeon to the Viceroy and Governor-General of the East Indies.

Captain P. S. Mills has been appointed Plague Medical Officer at Ambala. Captain H. J. Crossley has been appointed Specialist in Advanced Operative Surgery. The services of Captain H. A. H. Robson have been placed at the disposal of the Government of Bengal Presidency. Captain S. H. Middleton has been appointed to hold substantive medical charge of the 22nd Punjabis. Captain J. F. Boyd has been appointed on plague prevention duty at Benares. The services of Captain H. R. Dutton have been placed at the disposal of the Government of Bengal Presidency. Captain D. Fitzgerald has been appointed to officiate as Superintendent of

the Central Prison at Hyderabad. Captain H. Hallilay has been appointed Civil Surgeon at Lyallpur. Captain A. W. M. Harvey has been appointed Specialist in the Prevention of Disease to the Dera Dun Brigade. Captain J. F. Boyd has taken up duty at Ballia. Captain W. A. Mearns has been appointed to officiate as Superintendent of the Central Prison at Ahmedabad. The services of Captain D. D. Kamat have been placed at the disposal of the Government of Bombay.

Lieutenant D. M. Taylor has been selected for appoin tment as Specialist in Ophthalmology.

SPECIAL RESERVE OF OFFICERS.

Royal Army Medical Corps.

Cadet Thomas Warrington, from the London University Contingent, Officers Training Corps, to be Lieutenant (on probation) (dated March 25th, 1914).

TERRITORIAL FORCE.

Royal Army Medical Corps.

1st South Midland Field Ambulance, Royal Army Medical Corps: Henry Ernest McCready to be Lieutenant (dated Jan. 31st, 1914.

Welsh Clearing Hospital, Royal Army Medical Corps: Captain Ashley Bird to be Major (dated March 28th, 1912).

Attached to Units other than Medical Units.—Lieutenant Arthur H. Burnett resigns his commission (dated April 22nd, 1914).

JOURNAL OF THE ROYAL ARMY MEDICAL CORPS.

The April issue of the *Journal of the Royal Army Medical Corps* opens with a communication contributed by Colonel Sir William Leishman, F.R.S., to the discussion on anti-typhoid inoculation[1] at the International Medical Congress held in London last year, in which he claims that anti-typhoid vaccine "has made its proofs" and is "worthy of general acceptance as the strongest weapon with which we can fight this deadly scourge of armies in the field." A joint paper by Major S. L. Cummins and Major C. C. Cumming deals with Experimental Typhoid Infections in the Rabbit, and a communication by Major P. H. Falkner supplies some interesting notes on recruiting duties, being a Few Details for Junior Officers of the Corps. Major H. A. L. Howell continues the Story of the Army Surgeon and the Care of the Sick and Wounded in the British Army from 1715 to 1748. In Leaves from a Notebook Colonel R. H. Firth gives us some more of his charming cogitations, discoursing pleasantly and instructively in the present instalment on such things as the chemical action of bacteria, the chemistry of the flower colours, the colouring matter of the yolk of an egg, the living cell and its nucleus, the nutrition of man, animals, and plants, organic compounds of arsenic and antimony, diseases caused by protozoa, crystallography and the physics of solids, the future supply of motor fuel and the origin of petroleum and asbestos.

The King has given to Captain Colin Cassidy, R.A.M.C., and to Captain William Edward Marshall, R.A.M.C., permission to wear the decoration of the Fourth Class of the Imperial Ottoman Order of the Medjidieh, which has been conferred upon them by His Highness the Khedive of Egypt, in recognition of valuable services rendered by them.

[1] THE LANCET, Sept. 6th, 1913, p. 735.

VICTORIA LEAGUE IMPERIAL HEALTH CONFERENCE AND EXHIBITION.—This conference will be opened in the Imperial Institute, London, at 3 o'clock, on Monday, May 18th, by the Right Hon. Lewis Harcourt, M.P., Secretary of State for the Colonies. The function will extend until Thursday, May 21st. The Dominion Government of Canada has appointed Dr. Helen MacMurchy as a delegate. The Hon. Sir John McCall, M.D., will represent Tasmania. The Union Government of South Africa has appointed as delegates Dr. A. W. Sanders and Dr. Gordon B. W. Messum. The British Medical Association of South Africa will be represented by Dr. J. A. Mitchell. The Leeward Islands have appointed Dr. H. A. Alford Nicholls, and Trinidad Dr. H. M. Alston as their representatives, and Dr. Atkinson is a delegate from Hong-Kong. On Tuesday, May 19th, the subjects of discussion will be Town Planning and Garden Cities and Suburbs, and Workmen's Houses and Model Dwellings. On Wednesday, May 20th, the subject will be the Care of Child Life, when papers will be contributed on Infancy and Health by Dr. David Forsyth; Sir Charles Mackellar, Australia; Dr. John McCulloch and Dr. Helen MacMurchy, Canada; and Dr. Truby King, New Zealand. There will be general discussion at every session of the conference, and popular addresses will be given daily in the Exhibition Hall. All particulars can be obtained from the office of the Victoria League, 2, Millbank House, Westminster.

MEDICAL PRACTICE UNDER THE INSURANCE ACT.

(BY OUR SPECIAL COMMISSIONER.)

(*Continued from p. 1143.*)

XLIV.—LONDON: PANEL PRACTICE IN STEPNEY AND ENFIELD.

I NEXT proceeded to the East-end of London and called on a panel doctor with a large following at Stepney, an area which has always been in favour of the Act. In December, 1912, 26 practitioners from Stepney attended the pro-panel meeting held in Spring-gardens; in the course of January, 1913, 40 Stepney practitioners went on the panel; and now the profession is practically unanimous. This area is between Bethnal Green and Poplar. The district has a population of 278,000 inhabitants, and there are only 67 doctors in active practice. With three or four exceptions, they are all on the panel, and two of the practitioners who are not on the panel are over 60 years of age. There are some 93,000 insured persons in Stepney. The district is a distinctly Jewish one, and of the local practitioners a large proportion are of the Jewish faith and hold club appointments for the benefit of their co-religionists. Some of these were well worth having before the National Insurance Act came into operation, for the best among them paid their medical officer a capitation fee of as much as half a guinea per annum per member. A peculiarity among the Jewish population is that they like to consult several doctors; and those who could afford it belonged to several clubs and exercised the right of choice gained by the multiple payments. While some of the old clubs paid in Stepney very well in many instances, the practitioners have now lost not only the clubs but a number of private patients who have become insured persons. Nevertheless, there is no animosity against the Act. The security and the increase of income under the Act are held to compensate. Formerly, also, the East-end practitioner was badly hit by the hospitals and various institutions. After a private patient had called once or twice, if he found his case was serious he would seek admission to a hospital. To-day, whether such a patient succeeds or not in entering a hospital, his panel doctor does not suffer any financial loss. I was assured by my informant that the people at Stepney are appreciating the benefit of the Act, and that any feeling against the panel doctors which may have existed is dying out. The patients, it is true, when they found they had to take prescriptions to the chemists, complained of loss of time and the slowness of dispensing. But these services are now better organised.

Panel Practice in the Working at Stepney.

Here, as in other parts of London, a gratified surprise was expressed that there should be so few night calls. An informant told me that out of the 1850 insured persons on his list during the whole year only two had called him out at night. The visiting also had been comparatively light among the panel patients, and it seemed to him that the paying patients sent more frequently. His good fortune must be considered exceptional, as he had not lost as many private patients as he had expected, but his case is not that of every practitioner in Stepney.

As there are many dock labourers and carmen in

the district, there are numerous cases of minor surgery. The injured generally obtain a first dressing at the nearest hospital, but for subsequent care are referred to their panel doctors, and some of these patients entail visiting and dressing of wounds over long periods. But a great deal of help is obtained in such cases from the district nurses. The East London Nursing Society notably renders great service. The patients, unless they are very poor, make a donation to the nursing institution.

I had already come to the conclusion that when a panel doctor has his list made up in the main of his old patients he is not likely to be troubled very often, and what I learned in Stepney confirmed the view. The new doctor, unknown to the patients, and perhaps unfamiliar with the routine of club practice, dealing with newly insured persons, ignorant of the rules, has far and away a worse time than his experienced colleague. In short, experience teaches.

The Panel and the Women Workers.

I found that a large number of women in Stepney are now receiving medical advice who had never seen a doctor before the Act came into force. This also applied to some of the men, but was more general among women, who do not seem to make easy patients. There are many women working in tobacco and other factories in Stepney, and if such conditions as leucorrhœa or varicose veins are not unduly common among them, dyspepsia and constipation seem almost universal. The Jews, who are much more careful over their food, do not suffer so much. Anæmia is also very common, and a great deal of good is now being done by taking these complaints in hand early. In other quarters of London which are less poor, and where there is a mixture of residential and working-class population, the accounts given me of the insured women patients have differed somewhat from what I heard at Stepney. When a larger proportion of women is employed in shops varicose veins are more frequent, and also temperamental troubles to which I may make only this allusion—many women in this class bear responsibility badly; as hard worked and perhaps lowly paid assistants they enjoy good health, while as manageresses they break down.

Popularity of the Panel in Enfield.

I have selected Stepney for treatment as a type of a district occupied by a purely industrial population, but I found that the popularity of the Act was a feature also of Enfield, on the outskirts of the metropolis. There are many places just beyond the metropolitan area where the inhabitants are to a certain extent Londoners. They frequent the London shops, the London theatres, and occasionally consult the London physicians. Nevertheless, they have their local life, which is better developed than the local life of the London boroughs. Of such places Enfield is a type. A few county families still reside in the neighbourhood, and there are opportunities for good general practice among the middle classes. Several Enfield practitioners have as many private patients as insured persons to attend, and as usual the balance has to be struck between the loss from private patients becoming panel patients and the gain of regular returns.

The Enfield area is under the Middlesex Insurance Committee, and there are here 24 practitioners who at first were very determined to fight the Insurance Act. But the unanimity of action did not last long. Possibly political aggressiveness on either side led to disunion. Anyhow, those who wanted to treat the question on its own merits and not as a matter of party politics refused to follow the lead of those whom they regarded as party politicians, while those who had given pledges to resist the Government began to suspect themselves pawns in a political game. On Dec. 16th, 1912, a circular was sent round by two Enfield practitioners stating that, in their opinion, the time had come to accept service under the Act and inviting all the local members of the profession to a discussion, bearing in mind that the profession was not sufficiently unanimous to prevent the formation of a Government Medical Service. It was the old situation which I have so often described.

In response to this circular meetings, prolonged till midnight, were held and personal attacks were made. In the end, however, all decided to go on the panel, since when there has been no hostility between the members of the profession at Enfield, who in particular rejoice at their present freedom from the control of Friendly Societies.

The Question of Malingering.

This question has given rise to considerable trouble at Enfield; it is, indeed, the outstanding difficulty in the working of the Act here. At Enfield I found that the Workmen's Compensation Act was largely held responsible for the apparent excess of sickness. The victim of an accident has to suffer for a fortnight to claim compensation, so he does not want to be cured just two or three days too soon. Also, though injured, a workman may go back to light work. If he refuses to do this the employer may resent his attitude; if he does go back he is likely to lose his claim for compensation. Some workmen escape from this dilemma by exaggerating the symptoms and pretending to be too ill to undertake even very light work. So far as the law is concerned it is much better not to go back to work at all till the case is settled.

If in such cases the panel doctor regards the real condition of the patient he is likely to find himself in conflict with the insurance agent. It may be thought that the latter is particularly anxious to prevent malingering, as it costs the company he represents the sick allowance paid. This is so to a large extent when the agent represents a Friendly Society. In that case both agent and patient are partners in the society, and are therefore interested in not overtaxing their own reserve funds. But where the insurance companies act as Approved Societies neither agent nor patient is concerned in saving any money. The agent is not a partner, he has no share in the profits of the concern, but he is paid by results. The more insured persons he gets on his book and the greater the regularity of the payments they effect the larger the commission he earns. Therefore it is to the interest of the agent to be as popular as possible, and consequently he only ventures to denounce very flagrant cases of malingering. Much of the malingering is only for a short time, just to obtain a week's holiday or a few days in which to substantiate a claim under the Compensation Act. An agent who would prevent a wounded workman from getting compensation would very soon lose his popularity and livelihood.

The Bribing of Insurance Agents.

In this connexion I heard an ugly rumour which I think it my duty to repeat. I heard it—I cannot prove it. Some of the agents desire to add to their incomes by obtaining payment from the panel doctors in return for persuading insured persons to place their names on the doctors' lists. This

shameful state of affairs, I was assured, prevails on a larger scale than it is pleasant to contemplate elsewhere, though my attention was drawn to it at Enfield. In these circumstances, not only are newly insured persons canvassed for, but some who were already on other doctors' lists are persuaded to transfer. The dodge employed has been, as described to me, as follows. The agent acquires some knowledge of the symptoms of various diseases, and having ascertained what is the complaint of an insured person, he professes to have had the same disease himself; and while describing the symptoms tells a wonderful story of his rapid cure by "Dr. X Y Z." The sufferer is then likely to express his regret at not being on Dr. X Y Z's list, when out of the agent's pocket come transfer forms, and out of his mouth an offer to undertake all the formalities necessary to effect the change: and thus he earns a commission from the panel doctor, and also, of course, from the insurance company if the patient is not already on their books. That medical men should stoop so low as to offer agents commissions to get them patients is very humiliating. The possibility has been hinted at in my presence on more than one occasion; but at Enfield I received more than a hint.

The Panel Approximating to Private Practice.

To turn from this unpleasant aspect of the subject, I was assured that none of the practitioners at Enfield had been hurt by the Act. Those who had been most opposed to the Act were now willing to remain on the panel. The patients, on their side, had largely benefited. Many diseases, notably pneumonia, had been taken in time, lives saved, and much mischief prevented. A very considerable number also of women were insured, and for the first time in their lives were receiving medical advice. I did not meet with any expression of opinion that favoured a State Medical Service. The Act had proved, in the opinion of the men of Enfield, more advantageous than was thought possible, and no desire for any sort of radical change was expressed, though improvements on minor points were required. The general practitioners at Enfield are now quite united. They are all on the panel, so there is no contest between the panel and non-panel doctor.

(To be continued.)

MEDICAL SICKNESS, ANNUITY, AND LIFE ASSURANCE FRIENDLY SOCIETY.—The thirty-first annual general meeting of this society was held in the rooms of the Medical Society of London on April 2nd, under the presidency of Dr. F. J. Allan, chairman of the executive committee. The chairman drew attention to the satisfactory state of the society's affairs, which was indicated by the fact that the membership had increased by 78. The total amount paid out in sickness benefit during the year was £19,354, while the premiums received amounted to £20,726. The total funds of the society amounted to £255,350, and during the past year the working expenses had amounted to 6 per cent. of the premium income, which he thought showed great economy in administration. The quinquennial valuation showed, in his opinion, a satisfactory state of affairs. The society was flourishing and in a perfectly sound state and would be able to continue the bonuses which it paid at death or on attainment of 65 years. A subcommittee had been appointed to recast the rules, which in their new form were submitted to the meeting. The report of the committee and the audited accounts for 1913 were adopted. The motion that the quinquennial valuation report be received was carried with one dissentient. The proposed new rules were taken seriatim and adopted with certain amendments. The meeting concluded with the election of officers and a vote of thanks to the chairman.

Home and Foreign Notes.

(FROM OUR OWN CORRESPONDENTS.)

MANCHESTER.

The Summer Term at the University: Earlier Graduation.

THE summer term at the University began on April 20th. For the first time in the history of the medical faculty in 1913 the graduation day at the end of the summer term coincided with that of the other faculties at the beginning of July. In former years the medical graduation took place after that of the other faculties—towards the end of July. This year this precedent will be followed, and graduation in all faculties will take place on July 4th. In order to obtain sufficient time for the work during the summer term, the term itself begins now just after the middle of April. The winter session of 1914 will commence on Oct. 8th, some days later than usual.

Donations and Gifts to Salford and Jewish Hospitals.

The board of management of the Royal Salford Hospital in their annual report announce that the gift of £5000 promised by Sir William Mather has led to £5500 as additional subscriptions being secured, whereby the board was able to complete the whole of the large extensions commenced in 1906 without any encroachment on the invested funds of the charity. The legacies during the year comprised one of £3100 made by the late Professor Dixon Mann and another of £560 from the late Miss Ann Meredith. The contributions from workpeople amounted to £250, being a decrease on the preceding year. The Victoria Memorial Jewish Hospital a short time ago made an appeal for £10,000. Already £6500 have been obtained or promised. A memorial tablet to the late King has been placed in the hospital, and a ward is specially named the King Edward VII. Ward.

The Provision of Radium in Manchester.

The Manchester radium committee held a meeting on April 20th at the Town-hall, and approved a draft scheme for the provision of a supply of radium for the city and the surrounding districts. The following hospitals will coöperate: the Manchester Royal Infirmary, the Christie Hospital, Salford Royal Hospital, Ancoats Hospital, the Northern Hospital, St. Mary's Hospitals for Women and Children, and the Hospital for Diseases of the Skin. The radium will be stored at the Royal Infirmary and patients will be treated there, but radium being required at any of the other hospitals application can be made to the central depôt. It is proposed to establish a radium department with an expert radiologist as its head. An appeal for funds will be issued shortly. Substantial additions have been made to the Radium Fund since my last report on this question in THE LANCET of Feb. 28th. The total amount has now reached £4317. The Manchester board of guardians has also taken up the matter so far as relates to the question of providing radium for the treatment of cancer cases in the Poor-law infirmary. There are at present in the infirmary 24 such cases. The South Manchester board of guardians has passed a resolution that, subject to the consent of the

Local Government Board, radium to the value of £2500 should be purchased and that the Local Government Board should be asked to allow the guardians to borrow that sum, to be repaid during a period extending over 30 years. A similar application will be made in respect of an X ray apparatus, the loan to be repaid in 15 years. During 1913 there were 123 cases of malignant disease in the South Manchester hospital.

Excessive Sickness Claims by Women Employed in the Textile Industries of Lancashire and Cheshire.

The excessive sickness claims under the National Insurance Act by women, particularly amongst the textile workers of Lancashire, have attracted much attention. The Textile Operatives' Approved Society, with 65,385 women workers, paid for sickness in six months £24,000, an excess above the actuarial estimate of £10,500. During the six months the payments amounted to an average of 7*s.* 6½*d.* as against the actuarial estimate of 4*s.* 4*d.* per member. From a report obtained from the secretary of the Manchester Unity of Oddfellows—which has 872,608 members, 704,950 men and 167,653 women, in all parts of the United Kingdom—we learn that the payments in the various parts of the Manchester Unity have been on the average, including both men and women, England 7*s.* 9*d.*, Scotland 6*s.* 11*d.*, Wales 9*s.* 9*d.*, and Ireland 5*s.* 2*d.* per member. It appears that sickness claims are much heavier in Wales than in other parts of the United Kingdom, which is said to be the experience of all Friendly Societies. An analysis shows that Lancashire and Cheshire are in excess of the expectation so far as women are concerned, while the figures for men are all below the expectation:—

	Actual cost.	Actuarial estimate.
Sickness claims of men (nine months):		
Lancashire	8*s.* 11*d.*	9*s.* 9*d.*
Cheshire...	8*s.* 4*d.*	9*s.* 9*d.*
Sickness claims of women (nine months):		
Lancashire	8*s.* 8*d.*	6*s.* 6*d.*
Cheshire...	7*s.* 4*d.*	6*s.* 6*d.*

The excessive sickness claims in these two counties are attributed to the large proportion of married women working in the mills.

April 21st.

SCOTLAND.

Royal Visit to Glasgow.

ACCORDING to the provisional arrangements made for the visit of the King and Queen to Glasgow on Tuesday, July 7th, their Majesties on arrival in the forenoon will proceed to the Royal Infirmary, where the new buildings will be formally opened. The King will then lay the foundation-stone of the extension of the municipal buildings, and will be entertained to lunch in the city chambers by the corporation. At the conclusion of lunch their Majesties will be escorted to the Royal Hospital for Sick Children, at which the opening ceremony of the new hospital will be performed. The next item on the programme is a visit to the Western Infirmary, where at the main doorway their Majesties will receive an address from the managers. Afterwards the Royal visitors will drive through the grounds of the University on their way to the central station to entrain for Edinburgh.

Radium for Glasgow.

The movement started recently for the purpose of securing a supply of radium for Glasgow was advanced a stage last week at a meeting of influential citizens held in the Merchants' House, under the presidency of Sir John Stirling-Maxwell. The case was very well put by the chairman, who drew attention to the extreme costliness of radium. It never would be cheap, he said, but it was calculated that in future years its value might fall by one-half. It was also possible that other and cheaper methods might be discovered of obtaining the coveted rays which radium projects. Therefore, there was a measure of business risk in the purchase. Radium itself deteriorated so slowly that there was no objection to be raised to the scheme on that score. In 2000 years its power might be diminished by half, and a sinking fund of a few shillings could meet that contingency even for a purchase on a large scale. From the scientific and philanthropic side everything was to be said for a rich city like Glasgow having a supply of the new healing agent. The Senate has agreed to put a room at the University at the disposal of the committee, and to allow Mr. Soddy, who is one of the first authorities on radio-activity, to take general charge of it. The amount the committee has been advised to purchase is 300 milligrammes, and this would be available for the hospitals, and under certain conditions for private practice. Its use would be controlled by a committee of medical men, and a specialist would have to be employed to take immediate charge of it. The sum aimed at by the committee is £8000 or £9000.

School Children in Inverness-shire.

The annual report on the medical inspection of school children in the county of Inverness is an interesting document containing as it does many references to the general state of public health in the Highland area. According to the report, while many school boards, on whom lies the onus of seeing that treatment of defects is carried out, have been endeavouring to afford treatment to necessitous cases, as a matter of practice this has been found to be impossible to any great extent in the county, the sums provided by Government for the purpose being totally inadequate, if individual boards are to deal effectively with all the cases brought under their notice, while attempts at combined effort have also failed. In the remoter districts much difficulty is experienced in obtaining medical and nursing attendance. The need for specialised medical services in the Highlands is seen from the number of children with defective teeth and eyesight, and other conditions requiring the services of a specialist. Dealing with the question of feeding the school children, one of the medical officers says: "It is simply cruelty to send a child of five or six or seven years a distance of two or three miles to school in wintry weather with no other sustenance than a piece of dry oatcake, barley bread, or scone, with the prospect on arriving home at 4 o'clock of getting a solid meal—oftener not." He describes the children as "wiry," and remarks, "No wonder they are wiry."

April 21st.

TAUNTON AND SOMERSET HOSPITAL.—The committee has decided to carry out extensive additions to the Taunton and Somerset Hospital at an expenditure of £2063. A new operating theatre, with sterilising and anæsthetising rooms, is to be erected, and the children's ward is to be enlarged. The work will be commenced shortly.

IRELAND.

The Women's National Health Association.

THE annual meeting of the Women's National Health Association was held last week in Dublin under the presidency of Lady Aberdeen. Reports were presented dealing with the various activities of the association. A pavilion to accommodate 60 children will soon be completed at Peamount Sanatorium. The association has now 155 branches and 19,000 members.

The Dublin Housing Question.

The speech of the Chief Secretary to the Lord Lieutenant of Ireland in the debate in the House of Commons last week on the housing of the working classes of Dublin has caused considerable disappointment. Mr. Birrell a few months ago was in such a hurry to get to business that he would not hear of the appointment of a Vice-Regal Commission, but now he is all for delay. Having prevented, in his anxiety to deal with Dublin, any evidence being collected concerning other towns, he now thinks "it would be very difficult to make grants to Dublin and refuse them to other towns in Ireland." Mr. Birrell's speech seems to have shelved the report of the Departmental Committee. The unfortunate fact is that last November the public gaze was directed to Dublin, and now it is directed elsewhere, and the slums are to remain with us.

Epidemic of Measles in Dublin.

Dublin is at present suffering from a serious outbreak of measles, a disease which is not notifiable in the city. In four weeks there have been 102 deaths from this cause, and on April 11th there were 148 cases in the city hospitals. The disease is of a virulent type. Many of the deaths are among children who have suffered hardship in the recent industrial dispute. The general death-rate in Dublin has been alarmingly high for some weeks; in the week ending April 11th it reached 28·7 per 1000.

Sir Christopher Nixon.

I am informed that the report of the impending retirement of Sir Christopher Nixon from the active staff of the Mater Misericordiæ Hospital, to which I gave publicity last week, is incorrect. The distinguished physician has had a severe attack of influenza, from which there has been a retarded convalescence. He hopes, however, to take part in the work of the current session.

City Rates in Dublin and Belfast.

Last year the Dublin city rates amounted to 10*s.* 4*d.* on the north side of the city and 10*s.* 1*d.* on the south side. The rates which have just been imposed for the current year are 11*s.* 5¼*d.* on the north side and 10*s.* 9¼*d.* on the south side, being an increase of 1*s.* 1¼*d.* in the one case and 8¼*d.* in the other. In Belfast last year the municipal taxes (including Poor- and water-rate as in Dublin) were 7*s.* 1*d.*; this year they are 7*s.*

Scarlet Fever in Belfast.

There has been a further recrudescence of scarlet fever in Belfast, 52 cases having been notified during the week ended April 11th, as compared with 42 cases in the previous week and 25 cases in the corresponding week of last year.

Remarkable Weather for April.

It is many years since we had such warm weather in April as we have been experiencing during the past week in the north of Ireland, but unfortunately, owing to the want of any advance in road-making, the dust nuisance has become a veritable danger to health. Indeed, a cause of the sickness incidence in Belfast may well be the clouds of dust present in dry weather.

Poliomyelitis in County Tyrone.

I regret to report a further outbreak of acute poliomyelitis on the Tyrone shores of Lough Neagh. During the past week, in a farmer's house, the father, mother, and six children have been attacked, and two of the children—a boy aged 9 years and a girl aged 3—have died, while all the others are in a critical condition. It is really time the Local Government Board made some scientific investigation of these repeated outbreaks of this disease in Tyrone.

April 21st.

PARIS.

Proposed New Legislation as to the Care of the Insane.

MANY books, novels, and plays have been based on the supposed danger in France for a sane person of incarceration as a person of unsound mind at the instance of the family or heirs and from interested motives. Such cases have been very rare. Nevertheless, a Bill has been introduced into the Senate by M. Strauss to increase the discretion of the magistrates in such cases at the expense of that of the medical profession. This Bill, referred for consideration to the Académie de Médecine by the Ministry, provides that within three days of a committal the court must be advised thereof. When such committal has lasted for six months it may be made definite by judgment of the court. Nearly all alienists have protested against these provisions, and the Academy has now received from Professor Thoinot the report of its special committee of inquiry, which advises the rejection of the new provisions and recommends the continuance of the existing law with slight modifications. In support of these conclusions, M. Gilbert Ballet showed that the new law, in its desire to protect an insane person against arbitrary confinement, subjects him, and especially his family, to a greater wrong. Many patients now provisionally confined are cured in a few weeks by isolation and appropriate treatment, and return to civil life without the cause of their temporary absence being suspected, protected as they are by the secrecy of the medical profession. But the intervention of a court in the first three days would make the situation known to a *personnel* of magistrates, clerks, and employees under no such pledge of secrecy, whose lack of discretion, especially in small places, might compromise the moral and material position of the patient, and in the case of a woman her reputation, her chances of marriage, and her position in her family. Many families having members needing care would recoil before the publicity involved, and would send the patient to less exacting foreign institutions, especially those of Switzerland. As to the subsequent decision of the court after six months to prolong the confinement of those adjudged dangerous to themselves or others, it would amount to a sentence of imprisonment by an authority incompetent if the court alone decides, and useless if the court is merely to register the hitherto sufficient decision of the medical expert, while importing the harmful element of publicity. M. Ballet holds that so far from deserving the ignorant censure of novelists for their arbitrary rigorousness, the medical officers of asylums have too often prematurely released insane persons

temporarily improved by isolation and quietude. He cited the case of one person three times confined and released on the demand of his family, who on each release had committed a murderous assault (*assassiné une personne*). M. Ballet urged that even when the asylum fulfilled the function of a prison in preventing the insane person from doing mischief it should preserve its medical character and remain under medical control. M. Magnan, physician to the Asile Ste. Anne, stood alone in favouring the new Bill.

The Bath as a Mode of Vascular Gymnastics.

M. Dausset and M. Henriot recently reported to the Académie de Médecine some original investigations on the use of baths to restore elasticity to the peripheral vessels. They put the patients into a bath at 98·6° F., which was then gradually raised to 113°, and slowly lowered to 86° and even to 68°, according to the tolerance of the patient. The peripheral vessels thus undergo a mild but energetic vaso-dilatation followed by vaso-constriction, which restores the vascular elasticity in arthritics and regulates irregularities of arterial tension. The treatment appears to be without danger, and those submitted to it learn to sustain without discomfort huge variations of temperature in a few minutes. The variations of tension must be controlled by the pulse during the procedure.

The Congresses.

Eastertide is the season of special congresses. Cannes, has recently been the meeting place of a Congress of Thalassotherapy, its entire session being devoted to the study of marine heliotherapy. Professor Albert Robin presided. At Paris the Congress of Physiotherapy of French-speaking Physicians and the Congress of Learned Societies have taken place simultaneously. The last named devoted only one meeting to medical science. Dr. Magnan and Dr. de Lariboisière reported to it an ingenious method of estimating the superficies of the human body. They covered the entire body with a layer, as thin as possible, of a mixture of 26 grammes of white lead and 100 grammes of linseed oil. The person thus treated is weighed, and this weight compared with that before the application of the layer gives the quantity of the material of the layer. The weight of the material requisite to cover a square decimetre having been determined accurately by very many experiments, the entire surface covered by it on the body can be ascertained with some accuracy. The Congress of Physiotherapy was professionally the more important. Under the presidency of Professor Maurel, of Toulouse, many French and foreign medical men—especially Belgian, for the congress was organised conjointly with the Societies of Radiology and Electrotherapeutics of Brussels—were assembled. Among those present were Dr. F. Howard Humphris and Dr. Cyriax, of London, Dr. Salomonson, of Amsterdam, and Dr. Edmundo Xavier, of Rio Janiero. Professor Landouzy, in opening the congress, counselled physiotherapeutists to study with precision the real causes of the conditions they treated before choosing the particular physical measure appropriate to the case. M. Maurel reviewed recent progress in regard to the physiological action of the principal agents of physical therapy, light, heat, cold, various radiations, &c. The following subjects were on the order of the day: the rôle of various physical agencies, and particularly of movement, in psychasthenias, the physical agents in gout, ankyloses, myopathies, lupus vulgaris, and ptoses. Of individual communications a large number dealt with the treatment of cancer by physical agents. Particularly noteworthy was a communication from Dr. Doyen, who denied any value in this respect to radium and the X rays, which he accuses not only of being useless, but even of favouring the development of the neoplasm. In his opinion the only efficacious treatment consists in local elevation of temperature to a point that kills the cancer cells selectively, the healthy tissues remaining unaffected. To this end the high-frequency current is most useful. The congress concluded with a kinematographic demonstration by Professor Bergonié, of Bordeaux, of the physiotherapeutic methods of treating infantile paralysis, especially such methods as permit the exercise of walking. There was an important exhibition of newly invented apparatus for physical therapy.

April 20th.

VIENNA.

Large Donations for Charitable Purposes.

WITHIN the last four weeks we have had the pleasant but too unusual experience of learning that wealthy men have been giving away large sums of money for philanthropic purposes in this city. One donor has given 300,000 kronen (£12,500) for the care of mothers and infants, which sum will be handed over to the institute erected some time ago with the object of reducing the mortality of infants. Another sum, which will exceed 1,000,000 kronen, is the gift of a well-known politician who is retiring from public life and is desirous of conferring substantial benefits on nine of the chief charitable institutions of Vienna, including the Hospital for Incurables, the Free Ambulance Corps, and the Cancer Hospital. The conditions of this gift are such that the whole of the money will be devoted to relieving patients of the poorer classes, and care has been taken to guard against the Government pursuing its usual policy of appropriating large sums from these charitable grants in the shape of rates and taxes. In a third instance a tailor who had made a fortune in his business has presented the Wilhelminen Children's Hospital with 3,000,000 kronen and a large estate in a rural district. Hitherto the numerous children who have been treated in the hospital for any infectious disease—such as measles, diphtheria, scarlet fever, or any other infectious disease—have on their recovery had to return to the unhealthy surroundings of their homes, but this munificent benefactor now wishes these children to be sent from the Wilhelminen Children's Hospital to the country for convalescence. There has not until now been any satisfactory method of dealing with the young convalescents at this hospital, which draws its patients from the poorest classes of the population; but in future the generous gift which has been placed at the disposal of the institution will enable about 600 children every year to spend at least four weeks in the country.

Government Provision for Tuberculous Patients.

The Government has ordered a sum of 1,000,000 kronen per annum to be employed for the next ten years in order to provide institutions for the treatment of tuberculous patients. Really effective places of this kind are rather uncommon in this country; in fact, with the exception of

several small private establishments which are decidedly expensive, there is only one in Alland into which the poorer part of the population can try to obtain admission; it has accommodation for 150 patients, with a children's pavilion containing 64 beds. This institution will now be enlarged by about 100 beds, and in several other suitable places all over the empire such sanatoriums will be erected. Furthermore, in Tyrol the Government has begun the building of a "sunlight" treatment institute according to the system of Dr. Rollier, at Leysin, in Switzerland. It will be at an altitude of over 6000 feet above sea-level, and will be devoted chiefly to the treatment of surgical tuberculosis. By this method results successful beyond anything that could have been expected have been obtained, but it must be added that the recovery is slow, and that from one to two years of constant open-air life may be required.

The New Income-tax Regulations and the Medical Profession.

At the beginning of the present year new income-tax regulations were adopted by Parliament, and some of the items are of great interest to the medical profession. Whilst the limit of exemption from taxation has been slightly raised (1600 kronen, or £66), the general percentage of the tax has been raised by an amount varying from about 2 to 5 per cent. In future every person having a taxable income must make a correct return of it to the officials, and if intentional misstatement is discovered the delinquent may have to forfeit a sum equal to 10 times the amount of the tax. All medical men connected with private surgical homes, sanatoriums, and the like will have to inform the officials as to the number of operations performed there and as to the fees received by the medical advisers, who will also have to show their books in disputed cases. This will raise questions of professional secrecy and the medical corporations are taking action for the purpose of remedying such grievances. One section of the new regulations provides that the income-tax of bachelors and spinsters shall be increased by 15 per cent., whilst married couples without children or with only one child will have to pay 10 per cent. more than the ordinary tax; families with four or more children may claim a deduction of about 5 per cent. per child if the children are living with their parents.

April 20th.

UNITED STATES OF AMERICA.

Bills to Legalise the Practice of Osteopathy and Christian Science in New York State.

Two Bills have just passed the Legislature of New York State which are likely, if they receive the Governor's assent, to do great harm. One of them will relieve Christian Science practitioners of the fear of prosecution if their patients die under treatment, and will place the practice of Christian Science on exactly the same plane as that of medicine or surgery, and incidentally will favour the extension of infectious diseases. The other Bill is intended to place the osteopath on practically the same footing as the regular practitioner of medicine. The medical profession of the State is up in arms against the Governor signing these Bills, and it is hoped that sufficient influence may be brought to bear upon him.

Pellagra.

The Thompson-McFadden Pellagra Commission of the New York Post-Graduate Medical School and Hospital a short time ago issued its "first progress report" on its investigation of the disease in the Southern States. While the Commission has failed so far to discover the specific cause of pellagra, its investigations seem to point to the fact that it is transmitted by the stable fly. The members of the Commission do not agree with Professor Louis Sambon, of the London School of Tropical Medicine, that pellagra is transmitted by the simulium (buffalo gnat), but with him they reject the theory that spoiled maize is the essential cause of the disease, which has attacked at least 50,000 residents of the Southern States. As to the infectious nature of pellagra, the Commission considers that the higher incidence of it in the more populous districts, the indications of its occurrence in definite foci, and the definite tendency to self-limitation of the attack in the absence of specific therapy and during continuance of a maize diet, strongly support this conception. A comprehensive consideration of the insect life in Spartanburg County, South Carolina, where the investigations were undertaken, suggests that, if the distribution of pellagra is to be accounted for by a blood-sucking insect, the Stomoxys calcitrans is the most probable insect carrier. Congress has authorised the establishment of a hospital at Spartanburg for the care and study of patients with pellagra.

National Committee of Mental Hygiene.

At the sixth annual meeting of the National Committee of the Society for Mental Hygiene, held in New York on March 10th, Dr. Lewellys F. Barker, professor of medicine at Johns Hopkins University Medical School, was elected president; Dr. William H. Welch, Baltimore, vice-president; Dr. Thomas W. Salmon, New York, director of special study; and Mr. Clifford W. Beers, New York, secretary.

The Study of Animal Diseases.

It has been announced that Mr. John D. Rockefeller has given $1,000,000 for the purpose of studying the diseases of animals. This gift is timely in view of the recent activity of the anti-vivisectionists in the United States, and especially in New York.

The late Professor Joseph D. Bryant.

The United States loses one of its prominent surgeons through the death in St. Vincent's Hospital, New York, on April 7th, of Dr. Joseph D. Bryant. Dr. Bryant had suffered for some time from diabetes, to which complaint, I understand, he succumbed. Joseph Decatur Bryant was born in 1845 at East Troy, Wisconsin, and was therefore 69 years of age. He received his early education at the Norwich Academy in New York, and his medical education at the Bellevue Hospital Medical College, where he graduated as M.D. in 1868. He became an interne at Bellevue, and in 1871 was appointed assistant to the chair of anatomy. From that time he held several professorial posts there in succession in anatomy, general and surgical, clinical and orthopædic surgery, and, on the amalgamation of this medical school with that of the New York University in 1898, he became professor of surgery to the conjoined schools, which post he held up to the time of his death. He had filled many important offices, among them health commissioner of the city of New York, president of the New York Academy of Medicine and of the American Medical Association, and Surgeon-General of the State of New York. He was a Fellow also of the newly established American College of Surgery.

He published a valuable work on operative surgery, and the concluding volume of the "American Practice of Surgery," which he edited in conjunction with Dr. Albert H. Buck, was reviewed in THE LANCET with great commendation of the entire work.

The Death of Dr. Egbert Le Fevre.

Dr. Egbert Le Fevre, of New York, died on March 30th, after four days' illness, from scarlet fever, and his sudden death has come as a shock to all his friends. He was of French Huguenot origin, the son of James Le Fevre, D.D., was born in Raritan, New Jersey, on Oct. 29th, 1858, and was educated at Rutgers College School, New Brunswick, New Jersey. He graduated in arts at Rutgers College in 1880, and in medicine at New York University in 1883. He became visiting physician to City (Charity) Hospital of New York in 1895. He was also dean of New York University and of Bellevue Hospital Medical School, attending physician to St. Luke's and consulting physician to Beth Israel Hospitals. He had already held various professorships at the Medical College of New York University, when, on the consolidation of this institution and Bellevue Hospital Medical School in 1898, he became professor of clinical medicine and therapeutics there. He was a Fellow of the New York Academy of Medicine. Dr. Le Fevre was a man of imposing presence, upwards of 6 ft. 4 in. in height, and large in proportion. He was exceedingly popular, and had one of the largest consulting practices in New York City.

April 2nd.

INDIA.

Sir Arthur Sloggett's Farewell.

IN a circular memorandum bidding farewell to the medical services in India Sir Arthur T. Sloggett conveyed his thanks to all the administration and executive officers of both the Royal Army Medical Corps and the Indian Medical Service for the loyal support and coöperation extended to him by all ranks, and stated that he carried away with him the happiest recollections of the six years he had spent in the country.

Extension of Tenure of Director-General, I.M.S.

Surgeon-General Sir C. Pardey Lukis, K.C.S.I., has been offered and has accepted an extension for two years of his tenure of Director-General, Indian Medical Service, which would otherwise expire on Dec. 31st, 1914.

Control of Leprosy.

The Secretary of State has sanctioned the strengthening of the bacteriological department by 15 new appointments.

Tuberculosis in India.

At the Lucknow Sanitary Conference in January last it was decided that in view of the present prevalence of tuberculosis in India serious attention and special measures for dealing with the disease were demanded, and that one or more officers should be placed on special duty to study in detail the different problems connected with it. It is understood that arrangements are in progress for the employment of Dr. A. C. Lankester, who has given special attention to this particular subject, for the investigation, and he will shortly start a tour throughout India with this object. He will give lectures and make general inquiries into the prevalence, distribution, and special causation of the disease in India. At the conclusion of this tour he will prepare a special report embodying the results of his inquiries for the information of the governing body of the Indian Research Fund Association, which is financing the scheme.

School of Tropical Medicine, Calcutta.

At a recent meeting of the Calcutta municipal corporation a resolution was adopted reducing the amount of contribution to hospitals by one lakh of rupees and reserving that amount for contribution to the hospital proposed to be attached to the School of Tropical Medicine.

Appointment of Serologist in Calcutta.

The following press *communiqué* has been issued by the Home Department: In recent years much progress has been made in applying biochemical tests to the origin of blood stains, and these have been found to be of great value in medico-legal practice for some time. Lieutenant-Colonel W. D. Sutherland, I.M.S., has been working on the subject in Calcutta and training others in his methods. The results achieved have been such as now to justify more formal arrangements, and it is proposed to employ Lieutenant-Colonel Sutherland for a period of two years in the first instance as a serologist in Calcutta to whom cases may be sent from any part of India. The work is of an expert character and demands special equipment and facilities. It is thought that it will be performed more expeditiously and satisfactorily by one officer than at different provincial centres.

Pure Milk for Bombay.

A company has been registered in Bombay with a capital of a lakh of rupees for the supply of pure sterilised milk. Mr. Ratan Tata is chairman of the directors of the new company. Shares have been privately subscribed and the object is a philanthropic one, being to enable the residents of Bombay to secure milk guaranteed to be pure. It is not proposed to attempt to supply the whole of the city, but an effort will be made to supply milk required for infantile consumption. It is proposed to establish near Bombay, and probably in the Salsette district, a dairy farm with some four acres or so of grass land, and on the farm there will be one or more stables or cowsheds erected on up-to-date sanitary principles with sufficient accommodation for 100 animals.

Leprosy in Bombay.

The Government of Bombay has just issued a short pamphlet entitled, "Leprosy and its Control in the Bombay Presidency." The pamphlet first quotes the latest expert opinion on the degree of contagiousness of the disease, and defines the limits within which restrictions on and segregation of lepers are justifiable. It next sketches the Lepers Act, and explains how it has been applied to a large number of the municipal districts in the Presidency proper. It details the measures taken to provide accommodation for lepers in new asylums and by enlarging and improving existing asylums, and shows that special attention is to be paid to the care of the untainted children of leprous parents. Finally, mention is made of the machinery necessary for the working of the Act.

Madras Hospital Removal.

The Government of Madras in a recent Order has directed the removal of the General Hospital and Medical College, Madras, from their present site and reconstruction on the Spur Tank, which "satisfactorily fulfils the conditions required and, indeed, affords the only solution of the problem."

Plague Passports.

It is understood that the Madras Government

contemplate the abolition of the plague passport system in the near future, and the introduction in its place of a system under which people arriving from infected areas will be required to notify local authorities of their arrival. The matter is now engaging the attention of the Government.

Plague in Bihar.

Reports received by the press and from private sources state that plague is playing havoc in many of the towns and villages of Bihar, and there is quite a panic among the people owing to the virulent form in which it has broken out. This year the visitation appears to be worse than ever before.

Plague in the Punjab.

Mortality from plague in the Punjab has steadily increased during the current month. There were 2314 cases with 1702 deaths in the week ended March 14th. Every district except Lahore is now infected.

Agra Medical Students' Strike.

The medical students at Agra struck on March 15th. They left the hostel and passed the day and night in open spaces. Maltreatment is alleged to be their chief complaint. The authorities deny the students' version, and say that they were in the dark as to this development, which took place with great suddenness and secrecy. Until evening the students were playing games, and there was no inkling of any grievances on their part. The authorities believe this to be connected with the Lahore medical students' strike, but cannot give any definite cause with certainty.

Successful Use of Stovaine at Bangalore.

Two successful major operations have been performed by Major R. F. Standage, residency surgeon at Bangalore, who used the spinal anæsthetic known as stovaine, in the presence of the local surgeons. Major S. G. S. Haughton, R.A.M.C., who is travelling through India to familiarise the hospitals with the use of the drug, demonstrated the technique to the meeting.

March 18th.

Correspondence.

"Audi alteram partem."

THE RELATION OF TUBERCULOSIS AND TYPHOID FEVER.

To the Editor of THE LANCET.

SIR,—I should like to make a short comment and criticism on the annotation in THE LANCET of April 4th with the above heading, to which my attention has been drawn.

Without an actual record of the figures of my cases and of those of my colleagues at the London Hospital it would be rash to deny that tuberculosis ever follows typhoid so closely that its onset and development can be attributed directly to the influence of the typhoid, but I cannot recall to mind any such case having occurred, and I should require details of a large number of cases before being convinced of such a sequence between the two diseases. If, however, such a sequence has been observed by those competent to express an opinion, founded on an observed frequency of result, I would then be in hearty agreement with Colonel Woodruff's view that it must in some way be due to too rigid an observance of the old canons of the dietetic treatment of typhoid patients.

If I am right, as I believe I am, in saying that I have not observed tubercle following on typhoid, while other observers note the frequent sequel, the difference must be due in some way to the treatment I adopt. For many years now I have discarded altogether any routine in the dietary of my typhoid patients and have adopted a plan which, summed up in a sentence, is: "Feed a typhoid according to his appetite," controlled only by frequent examination of his abdomen and stools, the former giving a very early warning of any tendency to distension, the latter being a measure of the completeness of digestion (all ordinary articles of diet being allowed except fruits with small seeds, grapes being especially forbidden owing to the almost hooklike tip of their pips).

My first published article on the subject appeared in the *British Medical Journal* for 1906, and in that article I pointed out that I had never had any reason to regret my line of practice, and I can say that my experience since has not led me in any way to modify my views. There was also another very striking point which I brought out—viz., that having adopted my plan for some years before I published my results, I had practically forgotten that there were such things as complications and sequelæ of typhoid, because I had seen so few examples amongst the 200 or so cases upon which my paper was founded; I had had my proportion of deaths from toxæmia, but my proportion of complications and sequelæ was almost infinitesimal, while I gained nearly a fortnight in the average duration of the stay in hospital. I published a fuller article on the matter in the *American Practitioner* for May and June, 1913.

I am, Sir, yours faithfully,

Harley-street, W., April 20th, 1914. FRED. J. SMITH.

TONSILS AND ADENOIDS IN CHILDREN.

To the Editor of THE LANCET.

SIR,—The plea for fewer operations made by Mr. T. B. Layton in THE LANCET of April 18th is very timely. As a responsible school medical officer I may say I have from the first fostered a conservative attitude on this subject. Undoubtedly the removal of tonsils and adenoids in carefully selected cases is an operation of the highest possible value, and should be urged as a necessity. There are, however, two or three points raised in Mr. Layton's paper, which I propose briefly to comment upon, as my own experience has led me to exercise my judgment.

1. The presence of carious teeth and septic mouths as a cause of glandular enlargement. Not many months ago I was asked to issue a voucher for an operation on the tonsils of a school child who had not been previously medically inspected under the Act of 1907. I was informed that the local doctor had said that removal of tonsils was necessary. As I strongly hold that no vouchers for operation should be issued by an education authority unless the child has been previously medically inspected, I made arrangements to see this child myself when visiting the neighbourhood in connexion with some county work. The tonsils were only moderately enlarged and were, in my opinion, distinctly consequent upon eight carious teeth in the child's jaws. To have removed the tonsils with the mouth in such a condition would, in my opinion, have been bad surgery. I declined to issue a voucher for removal of tonsils, and pointed out that the dental surgeon was the proper person to deal with the case. I shall be disappointed if the tonsils do not undergo

spontaneous cure when once the teeth are properly attended to.

2. The second point is with respect to infection with scarlet fever, &c., as a post-operative complication. With all due respect, I beg to differ from Mr. Layton that the disease is incubating in the child when the operation is done. On the contrary, I am of opinion that the mechanical injury to the tissues inseparable from the operation is an evolutionary factor which enhances the pathogenicity of some almost ubiquitous mouth micro-organism and directly produces a *de novo* case of scarlet fever in a susceptible child.

The evolutionary factor is unquestionable in post-operative pneumonia, as admitted by Mr. Layton, and I am of opinion from cases which have come under my observation that it is equally responsible for some of the cases of post-operative scarlet fever. (We sometimes see a similar sequel after burns.) The practical suggestions made by Mr. Layton as to preliminary use of formalin tablets for a few days before operation, and the adoption of Professor Killian's rule never to operate if the temperature be above 99° F., deserve wide recognition and adoption.

I am, Sir, yours faithfully,

Norwich, April 20th, 1914. J. T. C. NASH.

THE RAPID INCREASE OF DIABETES IN WOMAN.

To the Editor of THE LANCET.

SIR,—Until quite recently we were accustomed to look upon diabetes mellitus as a disease which attacked males much more frequently than females, the proportion being, in fact, about 3 to 1. During the last 25 years, however, there has been, at least in this country, an extraordinarily rapid increase of the disease in both sexes, and such a much more marked increase in the case of females than males that the records even of the Registrars-General of England, Scotland, and Ireland respectively would seem to indicate that very soon the frequency of the disease in females will surpass and greatly exceed that in males.

The following returns of death from diabetes specifically as furnished by the three Registrars-General of the United Kingdom, cannot fail to make us apprehensive that some prejudicial change in the mode of living in this country must have taken place during the last quarter of a century, which is accountable for the great and rapid increase of the disease.

Deaths Registered from Diabetes in England and Wales.

Year.	Males.	Females.	Total.
1890	1076	787	1863
1900	1455	1312	2767
1911	1936	1917	3853
In Scotland.			
1890	45	56	101
1900	154	166	320
1911	206	239	445
In Ireland.			
1890	115	65	180
1900	162	106	268
1911	203	193	396

From the aforesaid returns, moreover, it is impossible for us to form anything like an adequate idea of the alarming increase of diabetes, for it must be remembered that very many more diabetics die every year than the returns of the various Registrars-General disclose. A state of hyperglycæmia lowers the resisting powers of the body and so renders the individual more susceptible to other diseases, to diseases which are apt to prove more fatal than usual because of the excess of sugar in the blood, and under such circumstances the death is registered under the intercurrent and not under the fundamental disease. The existence even of the diabetic state may neither have been known to the patient nor the medical attendant, and it may have escaped detection, for it is well known that during acute febrile diseases in diabetics the sugar often disappears temporarily from the urine.

It is undoubtedly a noteworthy fact that in the case of Scotland the death returns from diabetes are in 1911 quadruple what they were in 1890, and that in Ireland as well as England the specific death-rate from this disease is to-day twice what it was 25 years ago. Confronted with such facts we are impelled to believe that the great and rapid increase of the disease must be due to some influence or influences of a prejudicial character which have become more prevalent during the last quarter of a century. In my opinion the most important retrograde change in our mode of living which is disturbing the metabolic processes in our bodies and rendering us more susceptible to a state of hyperglycæmia is that which concerns our foodstuffs. Twenty-five years ago the question of adding chemical preservatives to our foodstuffs was unthought of, the practice of polishing rice and thus depriving this cereal of some of its most important mineral substances was unknown, and so, too, was the roller process of milling wheat as well as the bleaching of an already too impoverished flour. If the metabolic processes in our bodies are to be maintained efficiently the ingested foods will have to be more wholesome and less tampered with than they are to-day.

I am, Sir, yours faithfully,

JAMES OLIVER, M.D. Edin., F.R.S.E.

Harley-street, W., April 11th, 1914.

ALLEGED MALINGERING UNDER THE INSURANCE ACT.

To the Editor of THE LANCET.

SIR,—The return of many insured patients to work on the appearance in their district of the medical referee has been widely commented upon. It has been hailed as an administrative triumph and as defending the Insurance Act, if not from the fear of its enemies, at least from danger of impending bankruptcy. A sympathising press has spilt much ink and shed virtuous tears over the wickedness of fraudulent patients and conniving doctors, as if further inquiry into the merits of the case were needless, and nothing remained to be attended to but the punishment of the guilty. The surprising thing has been that members of the medical profession should have been ready to join in the general outcry, and this fact it is which, perhaps more than anything else, accounts for the partly perplexed and mainly indignant feeling among panel practitioners.

In order to ascertain what foundation there may be for the allegations that have been made, I have looked up my notes of the few cases of my own in which the question of malingering has been raised, with results which have seemed to me instructive, and am writing this in the hope that others may be led similarly to examine the matter for themselves, and, it may be, to take a more favourable view of the *morale* both of the insured and of

the insurance doctors than seems at present to prevail. The cases to which I wish to invite special attention constitute the majority of those patients of mine against whom accusations of fraud have been made or insinuated, and while not concerned to defend all their proceedings or to cast any aspersions on the skill and impartiality of the referee, I am bound to say that they did not at the time, and do not now, appear to me to have been cases of malingering at all. What they were and how far deserving of the treatment they received will be best indicated by three quite recent examples.

First, there is the case of a half-witted girl aged 19, rheumatic and neurasthenic, with a weak heart and frequent localised neuritis, who midway in one of her many illnesses went off the sick list, not because she felt able for work, but because she "was worried by the health visitor," and had before her eyes the fear, to her a very terrible one, of the medical referee. Next is the case of a teacher, aged 34, of extremely poor physique and not over strong mentally, recommended to take a long rest, but advised by the visitor that "although unable to teach she ought to find other work, which she could do," deterred from claiming sickness benefit through fear of being accused of fraud, and in the end throwing herself loyally on the charity of friends in order to obtain the prescribed rest. And, finally, there is the case of a barman, aged 27, with a valvular heart lesion and the peculiar type of combined physical and mental inefficiency which results from what is euphemistically called poor living, but what in his case was, in fact, chronic semi-starvation. The repeated catarrhs with slow recoveries, which form a large part of this man's insurance record, drew the attention of his Approved Society, who sent him a summons to appear before the medical referee. In this instance—and I am sorry to say that it is the only one of the kind I have to record—the zeal of the sham-detectors was unrewarded. In other respects they had planned the affair admirably, but a small oversight spoiled all. They had raided their victim at a time when he was not merely drawing no sick pay, but was actually at work earning his living.

The point in these illustrations, which it is the object of this letter to press home, is that under the Insurance Act we have to do with a very large number of persons who by constitution are, and must always remain, incapable, even under the most favourable conditions, of earning their living steadily and permanently; who, when they fall ill, require long periods of rest in order to recover, but who, as things are at present, have every inducement to resume work before they are in a fit state to do so. We have to ask ourselves whether it is right that such unfortunates should have constantly held over them the dread of being denounced as malingerers. Behind its somewhat cumbrous machinery is there not in this Act a humane intention meriting consideration from those who have to administer it? Is not this intention to lower in some degree the level of tolerable pain? Is it any part of the business of medical men to assist in frightening the "casual," the neurasthenic, the "born tired," and the feeble-minded into performing a little more painful labour than could otherwise be got out of them, for no other purpose than that an Act of Parliament, which is confessedly underfinanced, should go on for a little longer without having its notorious imperfections set right? Such are the questions which recent talk about malingering has set many of us asking, and which, once raised, can hardly be allowed to fall into abeyance till they have reached a final settlement.

In offering the above observations I do not, of course, deny that the class of persons in whose interest they are made furnish their quota of feigned illness. Having less vitality, they necessarily have for the most part less conscience than others, and will lie and prevaricate, when it serves their purpose, without scruple. What I would urge is that the expense entailed by their occasional malingering is a less serious evil than the premature and inconsiderate hustling of them into work which at present finds favour. In dealing with them we have, in fact, as far as possible to guard against both dangers, and the only way to do so effectually is to judge each case on its merits, unbiased by fear of irate Insurance Committees on the one hand or of diminishing panel lists on the other. Better to quit medicine altogether than practise it in the spirit of the slave.

I am, Sir, yours faithfully,

Stoke Newington, April 17th, 1914. I. B. MUIRHEAD.

THE BIOLOGY OF TUMOURS.

To the Editor of THE LANCET.

SIR,—I quite see the point made by Mr. Mansell Moullin in his letter in THE LANCET of April 11th, and must thank him for the explanation. In these laboratories we are trying to get to the bedrock of the questions of growth and reproduction because they seem to be the basis of the cause of tumours, including cancer; therefore I hope that Mr. Mansell Moullin will allow me to go into them a little more explicitly. We are trying to obtain answers to these questions not from any carping point of view, but in order to have a working basis.

What is meant by "growth," and does it clash with the expression "reproduction"? Assuming for the moment that a cell is the unit of life, when the cell divides (reproduction) into two, and the two into four, &c., if we are concerned with reproduction only, each daughter cell would be half the size of the parent, and as the generations pass the cells should progressively get smaller. But this is not the case. Each daughter cell *grows* until it usually attains the size of its parent. It seems to me, therefore, that when we speak of a tissue or an animal growing, we consider a condition brought about by a combination of two factors—reproduction, which increases the numbers, and growth, which increases the size of the individual units.

But this does not explain the meaning of "growth." It would appear that we must go further back than the cell as the unit of life—to the unit of living matter, which possibly is molecular; experiments with aniline dyes show that cells will live and move with part of their protoplasm apparently killed. When a cell grows, how does the increase of size take place? Is it due to each molecular unit increasing in size, or is it due to the reproduction of the units themselves bringing about an increase in their numbers? If the latter, it would seem justifiable to neglect the word growth.

This brings us to the question as to what are the effects of foods, which appear to build up the units and so increase their size. Foods contain auxetics, which stimulate reproduction; but the chemical groupings of auxetics (e.g., guanidine) are not necessarily foods. I fear these questions take us

into deep water, but they are important to pathology. I hope that Mr. Mansell Moullin will suggest any line of experiment, and I agree with him that negative evidence, such as that which shows that certain cells will not divide without an auxetic, is difficult to prove outright. But I hesitate to believe that it is impossible, and every effort is being made, and I think should be made, to prove the point one way or the other. It seems improbable that a function like reproduction should have more than one immediate exciting cause.

I am, Sir, yours faithfully,

The John Howard McFadden Research Fund, London, S.W., April 17th, 1914. H. C. ROSS.

INTERNATIONAL ANATOMICAL TERMINOLOGY: A CORRECTION.

To the Editor of THE LANCET.

SIR,—I should be obliged if you could find space to allow me to rectify an unfortunate *lapsus calami* in the "Plea for an International Anatomical Terminology Based upon the B.N.A.," which appeared in the second column of page 1132 of your issue of April 18th. I quote the offending words in italics. "How many of the 'nervi cerebrales' of the B.N.A. are in any sense cerebral? *These nerves are attached to the brain and spinal cord, and they pass to and fro through foramina on the one hand in the cranium, on the other in the spinal column.*" The error must have crept in at the last moment, for a recent manuscript, the only one on which I can now lay hands, reads: "The nerves attached to the brain and spinal cord pass," and so on. This wording was adopted in order to avoid clashing with either the British nomenclature or the B.N.A., for in the former the "cerebro-spinal" nervous system gives off the "cranial" and the "spinal" nerves, whereas in the latter the "cerebral" and the "spinal" nerves are attached to the "central" nervous system. In truth it is not easy to steer a safe course through these terminologies. They are almost as dangerous as the dark rocks of olden time, between which if a man should venture to sail they would crash together and crush his bark to atoms.—I am, Sir, yours faithfully,

WM. CUTHBERT MORTON.

The University, Leeds, April 18th, 1914.

A GAS INJECTING APPARATUS.

To the Editor of THE LANCET.

SIR,—In THE LANCET of April 18th there is illustrated under this heading "a new form of apparatus now in use at the Pinewood Sanatorium for injecting nitrogen or oxygen gas into the pleural cavity," and described as a "modification of the Kornmann, simplified."

I should like to warn intending users against the risk to which they will expose their patients. The illustration shows, and the description confirms, that "a large bottle reservoir is placed on a shelf behind, above the level of the top of the gas cylinders, and connected," &c. Measurements show that to displace all the water or fluid by nitrogen or oxygen gas will require a pressure equal to a column of 80 cm. of the fluid used. Thus the gas in the cylinder must be under this pressure, and on turning on the tap to connect with the needle a jet of gas at this pressure is forced through the point of the needle into the cavity or tissues where it may chance to be, and continuing until the pressure equalises, when the bottom tap is turned on and again this pressure is caused, the possible minimum pressure being the height of the gas cylinders, about 60 cm.—a too dangerous and totally unnecessary pressure for any contingency.

By the use of a cylinder of 29 cm. circumference and 36 cm. in depth holding 2000 c.c. attached to the back of a Kornmann apparatus at a level slightly below that of the gas cylinders in front, and connected to them by a three-way tap, I have an apparatus in use here in which it is impossible to produce a pressure greater than that of a column of 30 cm. of fluid, and with the gas cylinders filled to zero registering a pressure of 20 cm., which is more than sufficient for any purpose, and by the use of a small hand bellows attached to the large cylinder the upper portions of the cylinders are easily emptied of gas at any required pressure.

Murphy has laid great stress on the dangers of gas under pressure, and advises that it should be allowed to pass in only under the negative pressure produced in the chest. I have, however, found it necessary in some cases to produce a positive pressure up to 12 cm., but this is invariably towards the end of the operation, when it would be almost impossible to obtain it with the apparatus shown without refilling, or raising the reservoir as against the simpler use of the hand bellows.

I am, Sir, yours faithfully,

ALFRED ADAMS, M.D.Liverp., D.P.H.

The Sanatorium, Delamere Forest, April 20th, 1914.

THE WATER-SUPPLY OF TUTICORIN.

To the Editor of THE LANCET.

SIR,—The inhabitants of Tuticorin, in any event, owe you a deep debt of gratitude for your able and interesting leading article on "Leisurely Tactics at Tuticorin" that appeared in THE LANCET of Feb. 1st, 1913. We were confident that it would certainly awaken the conscience of the local government and that immediate steps would be taken by the latter to redress the long-felt grievance of the inhabitants of this flourishing seaport. But in this we have been disappointed.

The rapid progress made in that branch of sanitary science which deals with the investigations of the causes of diseases enables us to assert authoritatively that the nature and quality of the water used by any community is a matter of vital importance. Is it to be wondered, then, that this unfortunate city should be visited periodically with cholera and other diseases when no provision has been made to give the people a sufficient supply of good drinking water?

The present water-supply of Tuticorin is tapped from the Tampravarni river, the reservoir being at Korampallam, a village about five miles south-west of Tuticorin. This and the tank half a mile away, which directly feeds the several wells of the town, are open, so that the supply is invariably contaminated, and it is not unusual to find all kinds of animal and vegetable filth washed into them. No attempt at purification has ever been made, and, so far as I know, no serious measures have been adopted to prevent the contamination of the wells from which the people draw their water by means of buckets and other similar appliances.

Tuticorin has been recently favoured with a visit from Lord Pentland, the Governor of Madras, to whom we offered a right loyal welcome. We sincerely hoped that his Government was going to grant us a boon by the gift of a good and unfailing water-supply. But his reply to the address presented by the Tuticorin municipality is very

disappointing, and the water scheme that was in progress for more than four years has to be given up on account of increased financial outlay. Money should not stand in the way of carrying out any important sanitary scheme if it is within the range of possibility. Do the authorities who are responsible for this unfortunate state of affairs at Tuticorin realise that every life lost through preventable diseases is money lost to the country and the State?

No one doubts that this town has improved considerably during the past few years except in sanitation. Lord Pentland has told us that within ten years the trade of Tuticorin has increased from 3½ crores to 9 crores. Owing to the importance of Tuticorin as the port of Southern India the opportunities for commercial success are very great, but so long as no effort is made to give this town a good water-supply and thereby render it healthy I have serious doubts whether it will continue to be the centre of British commercial enterprise and the largest port in Southern India after the presidency town, Madras.

With apologies for encroaching on your valuable space, I am, Sir, yours faithfully,

Tuticorin, March 12th, 1914. F.R.C.S., D.P.H.

*** We have had news of a more favourable kind, and we hope that it is true that measures will be taken to provide Tuticorin with an adequate and pure water-supply. It is as necessary that an adequate supply should be secured as that it should be pure. The use of enclosed conduits and the protection of reservoirs are absolutely necessary, but it must be remembered that such precautionary measures will not increase the supply, and that in times of drought the natives are practically without water.—ED. L.

THE NATIONAL INSURANCE ACT.

THE QUESTION OF LIABILITY FOR STATEMENTS MADE IN CERTIFICATES.

IN connexion with an inquiry before a sub-committee in Kent as to allegations made against medical practitioners on the panel, the question has been raised before the Kent Insurance Committee as to the position of medical men who give certificates, and whose certificates are handed to others than the patients concerned. Mr. A. Maude, treating the matter on behalf of the medical profession, expressed the opinion that the certificates could be made the subject of an action for damages for libel, that there was no statutory protection with regard to them, and that a certificate might contain a statement to the effect, for example, that an insured person was suffering from alcoholism or venereal disease, which might be resented by the patient and upon which a claim for damages might be founded. This possibility was recognised in the House of Commons when the Bill was in the Committee stage, and as a way out of the difficulty it was suggested that the certificate might be handed to the patient, who could pass it on to his society or not as he preferred. In reply to this it has been suggested that it is not right in the patient's interest in some cases to inform him fully as to his condition, but that in any case to inform a society of a patient's state behind his back is a breach of faith. The matter is not without doubt and difficulty, because it is clearly undesirable that a member of the medical profession should be made the target of litigation in respect of work done by him professionally and of any statement honestly recorded by him as the result of his professional observation. But if a statement made is found to be true an absolute defence to an action for libel is constituted. Further, if it should be proved that some error had occurred, it would be open to a jury to find that the publication was so made, and the matter published of such a nature, that the occasion was privileged. It seems extremely likely that in most imaginable cases under the Insurance Act a certificate sent to a Friendly Society in order that the Act may be carried out effectively will be found either to be justifiable as true or protected by the circumstances in which it is "published," which it is submitted would include the implied acquiescence of an insured patient in the practice usually pursued in the case of members of his society.

BRISTOL INSURANCE COMMITTEE AND THE UNDISTRIBUTED FUNDS.

At a meeting of the Bristol Insurance Committee the questions raised by Mr. Danckwerts's opinion, taken by the London Insurance Committee as to the allocation of undistributed funds, had as their result the following resolution moved by Mr. J. L. Brown:—

That in view of the legal opinion obtained by the London Insurance Committee in respect of the unallocated surplus of the Panel Fund, this committee is of opinion that Insurance Committees throughout the country should be permitted to expend such surplus for the benefit of insured persons; they are further of opinion that such sums could be beneficially used in this direction, under Clause 21 of the National Insurance Act, in the provision of trained nurses for the purpose of nursing insured persons in cases of serious illness at their own homes or at suitable institutions, as provided by the Act.

An interesting and prolonged discussion took place in which the various aspects of the question were laid before the committee by the speakers, and an amendment was moved that the matter should be reported on by the Medical Benefit Sub-committee. In support of this it was suggested that if the undistributed funds did not go to the medical men on the panel the claims of the druggists might be considered and a portion of the money available might be used for making up the deficiency in respect of medicines prescribed. The amendment was, however, lost and the resolution carried by a large majority.

THE LIMITATION OF THE PANEL PRACTITIONER'S DUTIES.

An important question seems likely to be submitted for the decision of the Insurance Commissioners by the Surrey Insurance Committee. An insured person consulted a medical man on the panel, who found a papilloma on the lip of the patient, which he successfully excised. He performed the operation when unaware that the patient was insured, and charged a guinea for the operation. The local secretary of the Approved Society to which the patient belonged brought the matter before the Insurance Committee, and on the one side it was contended that the medical man could not make any charge to an insured patient, who was entitled as a right to such services as a medical practitioner on the panel could render, whereas those who differed held that the operation was outside the ordinary services due from a medical man on the panel and supported the

unanimous finding of the Local Medical Committee that the operation "was not of a kind which can consistently and in the best interests of the patient be properly undertaken by a general practitioner with ordinary competence and skill." The sub-committee which had inquired into the question had recommended that the Insurance Committee should accept this decision of the Local Medical Committee and should report the matter to the Insurance Commissioners. One of the speakers at the meeting of the Insurance Committee said that from an interview which he had had with the Commissioners at the time of the passing of the Act, and from what he heard the Chancellor of the Exchequer say at a conference of the Advisory Committee, there could be no doubt that the intention was as expressed by the decision of the subcommittee. Eventually it was agreed that the matter should be further considered by the subcommittee, and the ultimate result if it leads to the Commissioners laying down principles upon which their rule is to be interpreted will be of interest.

GLASGOW AND UNDELIVERED MEDICAL CARDS.

At Glasgow the Borough Insurance Committee has had to consider the case of over 40,000 insured persons who have not received their medical cards through the post owing to unnotified changes of address. The Commissioners had suggested removing the names of these persons from the registers, but the chairman at a recent meeting of the committee stated that it had been decided before doing this to take further steps to get the cards into the hands of those for whom they were intended.

Medical News.

UNIVERSITY OF LONDON.—At the Second Examination for Medical Degrees, held recently, the following candidates were successful:—

Part I., Organic and Applied Chemistry.—Gustave Adler, London Hospital; Eric Miles Atkinson, St. Bartholomew's Hospital; Roy Douglas Aylward, London Hospital; Kenneth Norman Grierson Bailey, St. Bartholomew's Hospital; Santiago Ernesto Barraza and John Churchill Blake, University College; Harold John Blampied, St. Thomas's Hospital; Joseph Erwin Adolphe Boucaud, Geoffrey Bourne, and Norman Jesse Boxall, St. Bartholomew's Hospital; Charles Hargreaves Bracewell, University of Liverpool; Reginald Bertram Britton, University of Bristol; Elsie Charlotte Bulley, University of Liverpool; Ellinor Marjorie Burnett, London (Royal Free Hospital) School of Medicine for Women; Francis Caldecott, Guy's Hospital; Thomas Carlyle, St. Bartholomew's Hospital; Duncan Gillard Churcher and *Wilfrid Edward Le Gros Clark, St. Thomas's Hospital; Apollo John Cokkinis, St. Mary's Hospital; Eric Vere Corry, University College; William Adlington Date, St. Mary's Hospital; Charles Owen Davies, University of Liverpool; George Vincent Davies, St. Mary's Hospital; Edwin Frank Deacon, Guy's Hospital; Simon Cyril de Silva Wijeyeratne, University College; Phyllis Decima Dixon, London (Royal Free Hospital) School of Medicine for Women; Howard Lexter Douglas, London Hospital; Monte Edwards, St. Thomas's Hospital; Guy Waterman Elkington, Guy's Hospital; David Washington Evans, University of Bristol; Grace Hamilton Ewart, London (Royal Free Hospital) School of Medicine for Women; William Feldman, University College; Gerald Hartas FitzGerald, Guy's Hospital; *Richard Kenrick Foulkes, King's College; Maximilian Walter Geffen, University College; Nannie Gibson and Dorothy Gilford, London (Royal Free Hospital) School of Medicine for Women; Lawrence Gill, Guy's Hospital; Ernest Howard Glenny, St. Bartholomew's Hospital; Henry Gluckman, London Hospital; Eryl Glynne, London (Royal Free Hospital) School of Medicine for Women; Alice Muriel Griffiths, University College, Cardiff; Herbert Glynn Hall, University College; Joan Hardy, London (Royal Free Hospital) School of Medicine for Women; Leslie William Hefferman, Middlesex Hospital; Kenneth Reed Hill, University College; Bertha Hinde, London (Royal Free Hospital) School of Medicine for Women; Eric Clark Hinde, Guy's Hospital; Edward Arthur Holmes, King's College; Joseph Christopher Campbell Howe, Guy's Hospital; George Franklin Wise Howorth, Middlesex Hospital; Amy Margaret Kerr, London (Royal Free Hospital) School of Medicine for Women; John Isaie Kühne, King's College; Felix Raoul Leblanc, Guy's Hospital; Emily Catherine Lewis, London (Royal Free Hospital) School of Medicine for Women; Gordon Parmiter Lindsay, Guy's Hospital; Alice Lloyd Lloyd-Williams, London (Royal Free Hospital) School of Medicine for Women; Kenneth McFadyean, University College; Robin Gordon Mack, St. Bartholomew's Hospital; Bruce Maclean, University College; Gladys Matthews, London (Royal Free Hospital) School of Medicine for Women; Puthiyavcettil Narayana Menon, University College; Farid Morcos, St. Mary's Hospital; Ernest Rudolf Dudley Nagel, St. Thomas's Hospital; Martin Herbert Oldershaw, University College; Alexander Edward Patrick Parker and Frank Portas, King's College; Eric Denholm Pridie, University of Liverpool; Henry Norman Pritchett, Guy's Hospital; Olive Rendel, London (Royal Free Hospital) School of Medicine for Women; John Charles Ryder Richardson, London Hospital; Gabriel Francis Rodrigues, University College; James Paterson Ross, St. Bartholomew's Hospital; Eleanor May Scarborough, London (Royal Free Hospital) School of Medicine for Women; William Reith John Scroggie, University College; *Simeon Cyril Shaw, Middlesex Hospital; Reginald Henry Sunderland, London Hospital; Noel Tayler, University College; Montague Beavan Tench, Middlesex Hospital; Benjamin Thomas, St. Mary's Hospital; *Daniel Jenkin Thomas and John Herbert Thomas, University College; George Edwin Tilsley, University of Bristol; Charles Maitland Titterton, St. Bartholomew's Hospital; Alfred Robert Tothill, King's College; Kenneth Robert Traill, Guy's Hospital; Kenneth Tratman King Wallington, University College; Richard Walters, London Hospital; Sydney Arthur Thomas Ware, St. Thomas's Hospital; Frederick William Arbuthnot Watt, London Hospital; Gladys Millicent Rutland Webster, London (Royal Free Hospital) School of Medicine for Women; Alfred Douglas Weeden, Middlesex Hospital; Sik To Wong, Guy's Hospital; Sydney Carver Woodhouse, London Hospital; Irene Yates, London (Royal Free Hospital) School of Medicine for Women; and Frank Young, Guy's Hospital.

* Awarded a mark of distinction.

The following advanced free lectures in physiology will be delivered during the third term of the session 1913–14: 1. A course of eight lectures on Oxidation in the Tissues, at University College, by Mr. C. Lovatt Evans, D.Sc., at 4 P.M., on Fridays, May 8th, 15th, 22nd, 29th, and June 5th, 12th, 19th, and 26th. Attendance at this course is recognised in connexion with the B.Sc. (Honours) degree in Physiology. 2. A course of four lectures on the Regulation of the Composition and Volume of the Blood, in the physiological laboratory of Guy's Hospital, by Dr. J. S. Haldane, F.R.S., at 4 P.M., on Thursdays, May 7th, 14th, 21st, and 28th. 3. A course of four lectures on the Gaseous Exchanges of the Body, in the physiological laboratory of King's College, by Dr. T. G. Brodie, F.R.S., professor of physiology in the University of Toronto, at 4.30 P.M., on Monday, June 8th, Wednesday, June 10th, Monday, June 15th, and Wednesday, June 17th.—The following lectures in advanced medical subjects will also be delivered free during the third term: (1) A course of three lectures on Carbohydrate Metabolism in Health and in Diabetes, by Dr. Hugh MacLean, at St. Thomas's Hospital Medical School, at 5 P.M., on Tuesdays, May 5th, 12th, and 19th; and (2) one lecture on Recent Observations upon Ulcer of the Stomach, by Dr. Charles Bolton, at University College Hospital Medical School, at 5 P.M., on Friday, May 22nd.—The Semon lecture in Laryngology, 1914, will be delivered by Professor Gustav Killian, of the University of Berlin, at the Royal Society of Medicine, Wimpole-street, on Thursday, May 28th, at 5 P.M., the subject being Suspension Laryngoscopy and its Practical Use. The chair will be taken by Sir Felix Semon, K.C.V.O. Admission free, by ticket obtainable from the Academic Registrar, University of London.—In the physiological laboratory at South Kensington a course of eight lectures on the Rate of the Blood-flow in Man in Health and Disease will be given by Dr. G. N. Stewart, professor of experimental medicine, Western Reserve University, Cleveland, U.S.A., at 5 P.M., on Tuesdays, May 5th, 12th, 19th, and 26th, and June 2nd, 9th, 16th, and 23rd.—Dr. Arthur Cyril Hudson has been recognised as a teacher of the University (Ophthalmology) at the Royal London Ophthalmic Hospital.—A University studentship in physiology, of the value of £50 for one year, will be awarded to a matriculated or graduated student of the University qualified to undertake research in physiology, and will be tenable in a physiological laboratory of the University or of a school of the University. Applications much be received by the Principal on or before May 31st.—The National Dental Hospital and College has been admitted as a school of the University in the Faculty of Medicine (in dentistry only) until Sept. 30th, 1916.

SOCIETY OF APOTHECARIES OF LONDON.—At the Primary Examination held on April 6th, 8th, and 9th the following candidates passed in the subjects indicated:—

Biology.—A. S. Newton, Liverpool.
Chemistry.—A. S. Newton, Liverpool.
Materia Medica and Pharmacy.—G. H. C. Harding, Liverpool;

A. E. Pollitt, Manchester; F. Simpson, Charing Cross Hospital; and F. Smith, Manchester.
Anatomy.—E. V. Briscoe, St. Mary's Hospital; D. V. Halstead, Guy's Hospital; P. Hughes and T. F. Reason, St. Mary's Hospital; R. D. M. Tims, St. Thomas's Hospital; and C. G. G. Winter, St. Mary's Hospital.
Physiology.—E. V. Briscoe, St. Mary's Hospital; D. V. Halstead, Guy's Hospital; D. E. Hearn, Durham; P. Hughes and H. D. L. Jones, St. Mary's Hospital; W. J. Walters, Cambridge and Guy's Hospital; and C. G. G. Winter, St. Mary's Hospital.

QUEEN'S UNIVERSITY OF BELFAST.—At examinations held recently the following candidates were successful:—

SECOND MEDICAL EXAMINATION.

Anatomy and Physiology.—Mary I. Adams, George V. Allen, Charles D. Crawford, Francis Ewart, Eli Freeman, James A. Harbison, John M. M'Cormack, Thomas J. Marner, William Napier, William H. Pedlow, John Scott, Ernest S. G. K. Vance, Robert Weaver, and John Wilson.
Physiology.—Hugh E. Hall and Arthur J. Millar.

THIRD MEDICAL EXAMINATION.

Pathology, Medical Jurisprudence, and Hygiene.—Robert M. Beath and Sinclair Miller.
Pathology and Materia Medica.—Albert E. M. Carleton, John Cullenan, Charles F. Davey, James E. Finlay, Patrick Kane, James M'Kay, Joseph R. M. Mackenzie, Sylvia Marsh, John F. Meenan, William N. Montgomery, William Russell, Herbert S. Smith, and James M. Smith.
Medical Jurisprudence and Hygiene.—Eileen M. Bell, David Corry, and Michael Gilligan.
Materia Medica.—Ribton G. Blair.
Pathology.—William C. M'Cullough.

APOTHECARIES' HALL OF IRELAND.—The following candidate having passed the necessary examination has been admitted a licentiate:—

Richard John Aherne, L.R.C.P. & S. Irel.

A DEVONSHIRE CENTENARIAN.—Mr. Jonathan Lock died at Plymouth on March 31st in his 102nd year.

SCHOOL MEDICAL SERVICE GROUP OF THE SOCIETY OF MEDICAL OFFICERS OF HEALTH.—Medical officers whose duties include school medical work and who reside in the metropolitan and home counties areas are invited to attend a meeting, on Saturday, May 2nd, at 2 P.M., of the School Medical Service Group of the Society of Medical Officers of Health at 1, Upper Montague-street, Russell-square, London, W.C., for the purpose of forming sub-groups for these respective areas. The general meeting of the group will be held at 3.30 P.M. at the same address, and all officers having any school duties are entitled to join the group and attend its meetings. Matters affecting the future status of the service, especially of the assistant officers, will be discussed at these meetings. The honorary secretary of the group is Dr. Armly Ashkenny, 38, George-road, Edgbaston, Birmingham.

DONATIONS AND BEQUESTS.—By will the late Mr. Septimus Brocklehurst, of Sefton Park, Liverpool, left £1000 each to the Liverpool Convalescent Institution, Woolton; the Royal Liverpool Country Hospital for Children; the Children's Convalescent Home, West Kirby; and the St. Paul's Eye Hospital, Liverpool.—Among other charitable bequests the late Mr. Benjamin E. Mocatta has left £500 to University College Hospital.—By the will of the late Mr. T. Sherran Whittaker, whose net personalty has been sworn at £15,000, one-half of the residue, after certain bequests have been made, will go to Guy's Hospital and the other half will be used for the purpose of founding and endowing a cottage hospital for poor persons resident in Broadstairs or the Isle of Thanet.—The late Alderman Henry Harrison, besides numerous other bequests, by his will bequeathed the following charitable legacies free of duty: the Blackburn and East Lancashire Infirmary, £1000; the Seamen's Hospital Society, £3000; the Imperial Cancer Research Fund, £1000; the Cancer Investigation Department of the Middlesex Hospital, £1000; and the Cancer Hospital (Free) for Cancer Investigation, £1000.—The late Mrs. Mary Mitchel, of Baggrow, Allhallows, Cumberland, has left by will £1000 each to the Blencathra Sanatorium, Threlkeld, the Cumberland Infirmary, and the Cumberland and Westmorland Convalescent Institution at Silloth.—His Majesty's First Commissioner of Works has sent a donation of £1000 to St. Thomas's Hospital to endow a bed for the use of Civil servants. The bed will be known as the King George V. Coronation Bed.—An anonymous donor has sent a cheque for £500 to the Huddersfield Royal Infirmary for the endowment of a cot in perpetuity in the children's ward.—The late Mr. John Ritchie, of Liverpool, has bequeathed £250 each to the Royal Infirmary, Liverpool, the Royal Southern Hospital, Liverpool, the David Lewis Northern Hospital, Liverpool, the Infirmary for Children, Liverpool, and the Bootle Borough Hospital.

THE Reverend Walter John Barton has been appointed to the head mastership of Epsom College, which will become vacant at the end of the summer term, owing to the resignation of the Reverend T. N. H. Smith-Pearse, who has held the office for 25 years. At Oxford Mr. Barton obtained a first class both in Moderations and in Literæ Humaniores. For the past seven years he has been an assistant master in classics at Winchester College, and is also a distinguished geographer.

SEVENTH ANNUAL NURSING AND MIDWIFERY CONFERENCE.—This conference will be held at the hall of the Westminster Yeomanry, adjoining the Horticultural Hall, Westminster, S.W., from Tuesday, April 28th, to Friday, May 1st, both dates inclusive. The proceedings will begin each day at 2.30 P.M. At the afternoon session on April 28th the State registration of nurses will be discussed by Sir Victor Horsley, and the proposed London County Council registration of nursing homes will be dealt with by Miss L. M. Stower. In the evening, under the chairmanship of Colonel Bruce Skinner, M.V.O., the work of the St. John Ambulance Brigade will form the subject of a paper by Lady Perrott, Mr. James Cantlie will describe the work of the Red Cross Society, and Miss Hilda Stewart will criticise from the trained nurses' point of view the work of Voluntary Aid Detachments. At 8.30 P.M. there will be a reception by the committee at the Rooms of the Royal Society of Medicine, after which an address will be delivered by Sir George Savage. On April 29th Dr. Elizabeth Sloan Chesser will preside, and Dr. Burnett Ham, late chief medical officer for Victoria, and Dr. Lucy Naish will respectively deal with the eugenic consideration of venereal diseases and the infant's first week of life. Among other subjects to be dealt with will be the development of infant consultations and the moral influence of the midwife. On April 30th Dr. T. N. Kelynack will occupy the chair, tuberculosis being the subject for discussion. Dr. H. Hyslop Thomson will speak on the care and control of the tuberculous patient. In the evening Dr. Janet Lane-Claypon will preside, and Dr. Annie McCall will take for her subject how to avoid operative midwifery, the effect of the Insurance Act upon lying-in hospitals being dealt with by Mrs. Glanville. At a later session on the same day Dr. J. S. Fairbairn will speak on the teaching of midwifery by lantern slides. On the last day of the conference, May 1st, under the chairmanship of Dr. R. Murray Leslie, Dr. Robert Armstrong-Jones will deal with the progress of mental nursing, Dr. Edwin L. Ash will take for his subject the nurse and the care of nervous patients, and Dr. R. Langdon Down the Mental Deficiency Act. In the evening, under the chairmanship of Dr. E. W. Goodall, fever will be the subject for discussion, asepsis in fever nursing being dealt with by Dr. A. Knyvett Gordon.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Dogs Protection Bill.

A LETTER of protest has been addressed to the Home Secretary with regard to the Dogs Protection Bill which is now before Parliament. The letter is in the following terms:—

> "We desire to express to you our strong conviction that the Dogs Protection Bill, which is put down for second reading on Friday, 17th inst., would inflict very severe injury, not only on medicine and surgery, but also on the study of the diseases of animals. We think that we have some right to ask you to oppose this attack on the advancement of medical science and practice: especially as the Final Report of the Royal Commission on Vivisection does not advise the prohibition of experiments on dogs. We are absolutely certain that such experiments are necessary for the complete study of many problems of physiology, pharmacology, and pathology."

The above protest, which is signed by more than 350 persons, has been presented by Sir Thomas Barlow, President of the Royal College of Physicians of London, to the Home Secretary. The letter is influentially signed by representatives of the various departments of medical science

throughout the United Kingdom. The signatories include the following:—

Medicine.—The President of the Royal College of Physicians of London, Sir Lauder Brunton, Sir James Reid, Sir William Church, Sir James Goodhart, Sir Thomas Fraser, Sir Dyce Duckworth, Sir William Osler, Sir David Ferrier, Sir James Kingston Fowler, Sir Malcolm Morris, Dr. C. E. Fitzgerald (President of the Royal College of Physicians, Ireland), Dr. J. J. Graham Brown (President of the Royal College of Physicians, Edinburgh), Sir Thomas Oliver, Sir Robert Phillip, Sir StClair Thomson, Dr. W. P. Herringham (Vice-Chancellor of the University of London), Professor William Russell (Edinburgh), Dr. Sidney Martin, Dr. James Mackenzie, Sir Alexander Simpson, Dr. W. Hale White, Dr. Byrom Bramwell, Dr. Hector Mackenzie, Dr. Frederick Taylor, Dr. John Playfair, Dr. Nathan Raw, Professor Robert Saundby, Dr. J. Mitchell Bruce, Professor Harvey Littlejohn; the Professor of Medical Jurisprudence, Glasgow; the Professor of Public Health, Edinburgh, and Professor George Murray.

Surgery.—The President of the Royal College of Surgeons of England, Sir Henry Morris, Sir Frederick Treves, Sir W. Watson Cheyne, Sir Frederic Eve, Sir John Bland-Sutton, Sir Berkeley Moynihan, Sir Victor Horsley, Sir Alfred Pearce Gould, Sir W. Arbuthnot Lane, Sir Alfred Fripp; the Professor of Surgery, Edinburgh; Professor Howard Marsh, Cambridge; Mrs. Scharlieb, Professor Gilbert Barling (Vice-Chancellor of the University of Birmingham), Mr. Edmund Owen, Professor William Thorburn, Mr. C. A. Ballance, Mr. Charters Symonds, and Sir George Beatson.

Gynæcology.—Sir Francis Champneys (President of the Royal Society of Medicine), Dr. Berry Hart (Edinburgh), Professor J. M. Kerr (Glasgow), Dr. W. S. A. Griffith, Dr. John Phillips, and Dr. Herbert Spencer.

Hospital administration.—Lord Knutsford (chairman of the London Hospital), Lord Northbrook (president of the Cancer Hospital), Sir Joseph Fayrer (superintendent, Edinburgh Royal Infirmary), Sir Frederick Macmillan (chairman, Queen-square Hospital), Mr. J. T. Helby (chairman, Metropolitan Asylums Board), and Dr. E. W. Goodall (medical superintendent, Eastern Hospital).

Tropical diseases.—Sir William Leishman, R.A.M.C., Sir Ronald Ross, Dr. C. J. Martin (director of the Lister Institute), and Major Cummins, R.A.M.C.

Physiology.—Professor J. N. Langley (Cambridge), Professor C. S. Sherrington (Oxford), Dr. A. D. Waller (London), Professor T. H. Milroy (Queen's College, Belfast), Professor D. Noel Paton (Glasgow), Professor W. D. Halliburton (King's College), Sir Edward Schäfer (Edinburgh), Dr. W. H. Gaskell (Cambridge), Professor W. M. Bayliss (University College), Professor William Thompson (Trinity College, Dublin), Dr. J. S. Haldane (Oxford), Dr. Leonard Hill (London Hospital), Dr. L. E. Shore (Cambridge), Professor Wace Carlier (Birmingham), and Dr. W. Ramsden (Oxford).

Pathology and bacteriology.—Professor Sims Woodhead (Cambridge), Dr. John Eyre (Guy's Hospital), Professor William Bulloch (London Hospital), Dr. R. M. Buchanan (bacteriologist to the Glasgow Corporation), Dr. Carnegie Dickson (Edinburgh), Professor H. J. Hutchens (Newcastle), Professor James Ritchie (Edinburgh), Dr. F. W. Mott (London County Council), Sir Almroth Wright (St. Mary's Hospital), Professor J. Lorrain Smith (Edinburgh), Dr. Vaughan Harley (University College), Professor Walker Hall (Bristol), Dr. Harold Spitta (St. George's Hospital), Dr. J. E. Arkwright (Lister Institute), Dr. J. D. Ledingham (Lister Institute), Dr. F. H. Thiele (University College Hospital), Mr. Alexander Foulerton (Middlesex Hospital), Dr. Ainley Walker (Oxford), Dr. Wakelin Barratt, Dr. Herbert Durham, and Professor W. S. Greenfield (Edinburgh).

Cancer research.—Dr. E. F. Bashford (director of Imperial Cancer Research), Dr. W. S. Lazarus-Barlow (director of Cancer Research, Middlesex Hospital), and Dr. Archibald Leitch (pathologist, Cancer Hospital, Brompton).

Anæsthetics.—Sir Frederic Hewitt (anæsthetist to the King), Mr. A. G. Vernon-Harcourt, and Dr. Dudley Buxton.

Diseases of the nervous system.—Dr. Henry Head, Sir Thomas Clouston, Dr. Edwin Goodall, Dr. George M. Robertson, Sir James Crichton-Browne, Sir George Savage, and Dr. J. S. Risien Russell.

Pharmacology.—Professor Arthur R. Cushny (University College), and Professor W. E. Dixon (King's College).

Veterinary medicine.—Sir John MacFadyean (principal, Royal Veterinary College), and Mr. O. C. Bradley (director, Veterinary College, Edinburgh).

Other sciences.—Sir E. Ray Lankester, Sir Norman Lockyer, Sir William Ramsay, Sir Henry Roscoe, Dr. Raphael Meldola, Professor Edward B. Poulton, Dr. W. H. Perkin, Dr. Charles S. Myers, Professor Alexander MacAlister, and Professor Arthur Keith.

HOUSE OF COMMONS.

THURSDAY, APRIL 16TH.

Treatment of Sick Poor.

Mr. ASTOR asked the President of the Local Government Board what was the total cost of institutional treatment of the sick poor for the last three years for which figures were available.—Mr. HERBERT SAMUEL wrote in reply: It is impossible to distinguish the cost of the treatment of sickness from the other expenses of maintenance of institutions. The Royal Commission on the Poor-laws and Relief of Distress estimated "that at least one-half of the total cost of pauperism is swallowed up in direct dealing with sickness." One-half of the total cost of the relief of the poor in the years ended March, 1911, 1912, and 1913, was approximately £7,500,000, £7,230,000, and £7,460,000.

Mr. ASTOR asked the right honourable gentleman how many boards of guardians had less than 100 beds for the treatment of the sick poor in their own workhouses and infirmaries respectively; how many had between 100 and 200 beds, how many between 200 and 300, and how many over 300 beds.—Mr. HERBERT SAMUEL (by written answer) replied: The following is the number of boards of guardians who have provided beds for the treatment of the sick poor:—

—	Less than 100 beds.	100-200 beds.	200-300 beds.	Over 300 beds.
Workhouses ...	330	36	16	18
Infirmaries	144	41	27	59

The above table includes the provision for chronic cases and cases under medical care but not needing active or continuous treatment or special nursing as well as acute cases. It does not include the number of beds provided by the Metropolitan Asylums Board or by other joint Poor-law authorities.

Mr. ASTOR also asked the right honourable gentleman how many boards of guardians had appointed salaried nurses for attending outdoor sick, how many subscribed to local nursing associations for such attendance, and how many made no provision for nursing the outdoor sick poor.—Mr. HERBERT SAMUEL replied: In eight unions the guardians employ salaried nurses appointed by themselves to attend the outdoor sick; 473 boards of guardians have been authorised by the Local Government Board to subscribe to district nursing associations. In the remaining 165 unions no similar provision has, so far as I am aware, been made, but I may point out that in these unions both the board of guardians and the relieving officers have power to employ a nurse to attend any particular case when required.

District Medical Officers.

Answering Mr. ASTOR, Mr. HERBERT SAMUEL wrote: The total number of district medical officers in England and Wales last year was 3761. In all but six cases the remuneration is by fixed salary with additional fees for midwifery cases and operations. In two unions payment is made wholly and in two partly by fees for attendance. Population has not been adopted as a direct basis for remuneration in any case.

Housing in Dublin.

In the course of the discussion in Committee of Supply on the vote for the Local Government Board, Ireland, attention was called at length to the report of the Departmental Committee on Housing in Dublin.

Mr. CLANCY said that there were still 20,108 families living in one-room tenements in Dublin. The report of the Departmental Committee showed that human beings ought not to be allowed to live in these tenements if they could possibly be accommodated elsewhere. Tuberculosis was bred in these places to an extent which was quite remarkable.

Sir A. GRIFFITH-BOSCAWEN dealt at length with various matters referred to in the report, and asked what steps the Government contemplated taking to remedy the disgraceful state of things which the report revealed.

Lord ROBERT CECIL described the state of things revealed by the report as incredible.

Mr. BIRRELL (Chief Secretary to the Lord Lieutenant of Ireland) said that the responsibility of the Irish Local Government Board for the corporation of Dublin was small. He could not act with any degree of authority except on complaint, and the complaints which had been made from time to time as regarded the Dublin corporation had not been great or numerous and the powers which he had been able to exercise were very small. He was glad that this departmental report of the Local Government Board had excited attention. It was a very painful report. It had put the state of life of the poorer portion of the inhabitants of Dublin in a manner which he did not think anyone could read without feeling grieved and to some extent ashamed. At the same time he did think that the Dublin corporation had been rather harshly dealt with by honourable Members opposite. It had done an enormous amount of work in main drainage, electric lighting, and paving, to say nothing of its own schemes for housing the poor, in which it was acknowledged to have done more than any other municipality in any other city in the United Kingdom. But Dublin was a very poor place. Wages were lamentably low. The rates were close upon 11*s.* in the £, collected from poor people. That, however, did not alter the fact that this report proved a lamentable state of things, and it had also shown that the Dublin corporation had not exerted to the full, or to the extent which it ought to have done, the legislative powers which it already possessed. An honourable Member had referred to 17 persons in the corporation who were owners of property. There were really only five who owned more than one house, and of the balance of 12, each was the owner only of one single tenement. He did not say that that was right or wrong, but to describe them as being 17 owners of tenement property would rather lead one to infer that they owned a considerable portion, at all events, of the tenement houses in Dublin. They owned a most insignificant fraction of these houses,

and there were not more than two or three who owned more than one or two at the most. He was asked what was he going to do. Something must be done. If more could be done than was done at present to assist Dublin in consequence of its exceptional conditions and the sorrow of its inhabitants, certainly the Chief Secretary would not be indifferent to any proposal of that sort which was likely to be made. But he was sure that no Chancellor of the Exchequer would be satisfied or willing to make a grant to Ireland and to refuse it to other places. It would be a very dangerous proposition to start with that wages were to be kept down by keeping down rents by means of payments which were to come out of other people's pockets. Therefore he could do no more than say that this report did not contemplate an instantaneous remedy of that great wrong. It might be that this corporation had acted selfishly, but at all events it did not create the situation. If it had acted strictly and rigorously up to its duties it was a question whether the members would have succeeded in being returned a second time. Still they might have done more than they had done. When all was said and done, the task of finding proper accommodation for all the poor people in Dublin was a difficult one. It might be said, "Build homes outside," but it would be a difficult thing to persuade them to go. To make a town plan for Dublin successfully and wisely was a task which of necessity must take some little time. On one thing he was perfectly clear, and that was that this report could not be allowed to rest as so many other reports had done in the pigeon-holes of offices. He was glad that this debate should have taken place and that the horrible state of things, in no sense exaggerated, should have been discussed. He hoped that the criticism to which the corporation of Dublin might be properly and fairly exposed, would not do it anything but good, and that honourable Members might look forward in the near future to such a rebuilding and reconstitution of these old tenement houses as must greatly advantage the health, happiness, and morals of the people of Dublin. The tenement houses were, he thought, quite capable of economic improvement if there was a good deal of expenditure upon them. But they must be emptied out of their present inhabitants. The other houses referred to in the report—some of them new and recently built houses—had become just as unfit as, and perhaps in some respects even more repulsive than, the tenement houses themselves. All these things he hoped would sink into the hearts of the people and lead to a remedy.

FRIDAY, APRIL 17TH.

Dogs Bill.

Sir FREDERICK BANBURY moved the second reading of the Dogs Bill. He said that he had heard the Bill described as an Antivivisection Bill, and it had been said that it was a measure which stopped vivisection. It did nothing of the kind. All that it did was to stop eminent scientists who did perform operations on living animals from using dogs for that purpose. The return for 1912 showed that the dogs and cats experimented upon without anæsthetics numbered 321. The dogs and cats allowed to recover after serious operations numbered 567. There was a certain amount of evidence given by medical men and learned professors to the Royal Commission on Vivisection to show that dogs were necessary for their experiment. On the other hand, there was also evidence given by other medical men and scientific men to the effect that dogs were not necessary. In the report there was no finding by the Commissioners as to there being a necessity for experiments to be made on dogs. If the Commissioners had been of opinion that in the interests of science it was necessary to include dogs among the animals to be operated upon, they would have said so in their report. The honourable Member read extracts dealing with experiments upon dogs. Man having made a friend of the dog for many thousands of years had rendered that animal particularly sensitive to all forms of pain and terror—much more so than the ordinary animal, which was in a more or less wild state. Therefore, unless it was proved that experiments on dogs were useful to man—and he said that it had not been proved—was it not right that he should ask that dogs should be exempted from being put to the torture of these experiments? He trusted the House would give the Bill a second reading.

Colonel LOCKWOOD seconded the motion.

Mr. RAWLINSON moved as an amendment the rejection of the Bill. He pointed out that experiments on living animals in this country could only be carried out by persons to whom licences had been granted, and these licences could only be obtained by persons who had received recommendations from the heads of certain scientific institutions. The licence could only be used upon certain registered premises. There was a power given to the Home Office to demand a full report as to what had occurred at a particular operation from the person who was authorised to perform it. That showed that the power of vivisection was restricted in England by the most careful safeguards practically at every operation. If there was any further safeguard required by all means let that matter be considered. Certainly it was not necessary to pass the second reading of this Bill at all to remedy that defect if it existed. This country had already gone further than any other in the way of restricting scientific research. Scientific men said that it was necessary that dogs should be used for experiments. It was owing to the experiments of Pasteur on animals, including dogs, that the nature of hydrophobia was cleared up. Were honourable Members going to hamper for all time the hands of those who were engaged in combating such diseases as cancer by extraordinary restrictions on experiments which might at any moment afford the chance of putting an end to so much human misery, pain, and loss of life.

Sir PHILIP MAGNUS, in seconding the amendment, observed that the House could trust scientific men to secure the exclusion and exemption of dogs from all experiments where they were certain that they could find other animals to serve their purpose.

Sir HENRY CRAIK opposed the Bill. He said that he wondered how without the inoculation experiments which had been tried upon dogs it would have been possible to attain to the great knowledge now available in regard to tropical diseases. He wondered how the experiments upon the heart which were published the other day would have been possible but for dogs—those experiments which, in the words of a medical man, had revolutionised medical knowledge of the heart and of the way in which medical men could deal with the valves of the heart and with diseases hitherto believed to be incurable. The truth was because of its nervous and physical structure, its habits of life, and the fact that it was at once vegetable eating and carnivorous, the physiology of dogs was more analogous to that of humanity than that of any other animals except the superior ape.

Dr. CHAPPLE dealt at length with the valuable scientific results which had been obtained from experiments on dogs. A Bill like the present, with its spurious sentimentality and ignorance of facts, might well interfere with a line of research which promised so much benefit to humanity.

Mr. ELLIS GRIFFITH (Under Secretary of State for the Home Department) in speaking for the Government observed that he might be allowed to say a word or two about the present position of affairs and the existing law. In the course of the discussion some charges had been made that there was cruelty, and perhaps unnecessary cruelty, now going on. So far as the Home Office was concerned he desired to say most emphatically that it did not think there was any basis or foundation for that charge. Perhaps the House would allow him to state shortly what were the present safeguards under which these experiments were conducted. In the first place, without anæsthetics there could not be inoculations beyond simple ones or superficial vivisection. In that there was no cruelty. With regard to experiments with anæsthetics these could only take place under three conditions, which were always attached to every licence for any experiment under anæsthetics. First of all, all operative procedures in connexion with the experiments detailed in certificate "B" should be carried out under anæsthetics of sufficient power to prevent the animal from feeling pain. Secondly, the animals experimented on should be treated with strict antiseptic precautions, or if these failed and pain resulted the animals should be immediately killed under anæsthetics. There was a third provision to which he attached special importance. It was in three paragraphs and referred to the anæsthetic condition, the antiseptic condition, and the pain condition. The paragraphs provided first if the animal after and by reason of any of the experiments under certificate "B" was found to be suffering pain which was severe or was likely to endure, and if the main result of the experiments had been attained, the animal should forthwith be painlessly killed. This condition was formerly imposed in some cases. It was now imposed in all cases. The second paragraph provided that if an animal after and by reason of the said experiment was found to be suffering severe pain which was likely to endure, such animal should forthwith be painlessly killed whether the main result of the experiment had been attained or not. That was new and was now universally imposed. The third paragraph provided that if any animal appeared to an inspector to be suffering considerable pain and if the inspector directed such animal to be destroyed it should forthwith be painlessly killed.

Colonel LOCKWOOD: That was one of the recommendations of the Royal Commission.

Mr. ELLIS GRIFFITH: That is carrying out the recommendation of the Royal Commission, of which the right honourable gentleman was a member. The debate was different from any other debate that had taken place on the subject matter of this Bill. In 1912 the honourable baronet introduced a Bill on the very same day, curiously enough, that the report of the Royal Commission was issued. In 1913 a Bill on this subject passed second reading in a manner best known to the honourable baronet himself

without debate. He mentioned this to make it perfectly clear that this was the first time this House had discussed the subject matter of this Bill with the recommendations of the Royal Commission before it. Several extracts had been read from the report that afternoon, but with the exception of three lines no honourable Member had quoted the really operative clause of it. One honourable member quoted the first three lines. They were these: "In view of the variety of practice and divergence of opinion as to the necessity of employing dogs for experimentations and demonstrations, we find some difficulty in deciding upon this important question." There the honourable Member left the matter. Obviously honourable gentlemen must read further. The report proceeded: "Some of us regard the provisions of the existing law as sufficient; some of us would prefer that in the case both of experimentation and demonstration the further special protection given to horses, asses, and mules should be extended to dogs, while some of us would exclude dogs altogether." Now the operative words came: "But if any alteration is made in the existing procedure the majority of us would agree that the special enactments now applicable to horses, asses, and mules might be extended to dogs and also to cats and anthropoid apes." That was really all that the Royal Commission had done upon this interesting point. At present experiments on dogs might be performed as long as the experiments were under anæsthetics without a certificate to the effect that the experiments would be frustrated if a dog was not available, whereas if the experiment was on horses, mules, or asses such a certificate was necessary, and he in the committee last year supported the proposal to make an amendment to the effect that dogs should be put in the same position as horses, asses, and mules so that a special certificate should be required when the experiments were under anæsthetics that no other animal would serve for the particular purpose for which the experiment was made. That amendment was carried, and it led ultimately to the defeat of the Bill. As far as he was concerned what he favoured was not the total prohibition of all experiments on dogs, but if it was thought, as he thought, that additional safeguards were necessary, the safeguards which he had now indicated, should be available for the protection of dogs, so that in future if the suggestion which he had made was accepted no one would be able to have an experiment upon dogs unless it were found that no other animal was available for the purpose. That was a compromise. He did not want to oppose the second reading, but he wished to say quite frankly that he did his best to hold the balance between the two sides in committee last year. If the second reading were passed, he should be under the necessity in committee of supporting or moving some amendment so as not altogether to prohibit vivisection upon dogs, but to give that additional safeguard that belonged to the animals mentioned in Section 5 of the Act of 1876. It was his proposal to remove the dog from one classification to another, and although perhaps it would not satisfy the promoters of the Bill, it would give some safeguard.

The amendment for the rejection of the Bill was defeated by 112 votes to 80. The second reading was then agreed to.

MONDAY, APRIL 20TH.

Ireland and Medical Benefits.

Mr. ARTHUR HENDERSON asked the Chancellor of the Exchequer whether he intended to make an attempt this session to secure the passage of the Bill to extend medical benefits under the National Insurance Act to insured persons in Ireland.—Mr. WEDGWOOD BENN (on behalf of Mr. LLOYD GEORGE) replied: My right honourable friend is communicating with my honourable friend on the matter to the effect that he fears it is impossible to make the promise asked for.

Insured Persons and Medical Tickets.

Mr. CHARLES BATHURST asked the honourable Member for St. George's-in-the-East, as representing the Insurance Commissioners, (1) whether he was aware that Approved Societies were instructed to cease notifying the Insurance Committees of the changes of addresses of their members as from Jan. 12th, whereas the London Insurance Committee failed to send out medical tickets to insured persons resident in their area until the end of March, and that over 25 per cent. of the medical tickets sent out by that Committee had already been returned through the dead letter office; and would he say what steps he proposed to take to secure that the medical tickets should reach insured persons in London who had not received the same and who were having to pay for medical treatment as private patients; and (2) whether his attention had been called to the letters of complaint constantly being received by Approved Societies from members who had not received medical tickets and who had not received any answer to the applications which they have made for the same upon the prescribed form; whether he was aware that in a number of such cases insured persons were being compelled to pay fees to panel doctors for treatment given before their medical card was received; and would he state what steps the Government proposed to take to deal with such cases?—Mr. WEDGWOOD BENN answered: Experience has shown that Approved Societies do not become aware of the changes of address of their members sufficiently early to render their notification to Insurance Committees of any value commensurate with the labour involved, and arrangements have accordingly been made under the system now established with the express object of enabling such notifications to be dispensed with. As I have already said, special procedure has been set up to enable insured persons who have not received medical cards to obtain them upon application, and my right honourable friend has no reason to believe that these arrangements are not adequate for the purpose. But if the honourable gentleman will furnish particulars of the cases referred to by him in which the applicants have not been promptly dealt with, he will cause inquiries to be made.

Motor Ambulances and Petrol Duty.

Mr. CROOKS asked the Chancellor of the Exchequer whether he would exempt from duty all the petrol spirit used by authorities under the Local Government Board which had a service of motor ambulances to convey patients to hospitals and infirmaries.—Mr. MONTAGU (Secretary to the Treasury) replied: My right honourable friend hopes to deal with this matter in the Revenue Bill.

TUESDAY, APRIL 21ST.

Institutions Approved for Medical Benefit.

Mr. SNOWDEN asked the honourable Member for St. George's-in-the-East, as representing the Insurance Commissioners, to state what number of institutions had been approved for medical benefit under Section 15, Subsection (4) of the National Insurance Act in England and Wales; the number of persons who had accepted this method of medical benefit; and the number of institutes which had received the full amount allowed for medical benefit.—Mr. WEDGWOOD BENN wrote in reply: 87 systems and institutions in England and Wales have been approved under Section 15 (4) of the National Insurance Act, 1911. The rest of the information asked for is not available.

Vaccination and Life Insurance.

Mr. SNOWDEN asked the Postmaster-General whether unvaccinated persons were granted annuities on more favourable terms than those who were vaccinated; and, if not, would he explain why this was not done, seeing that his department assumed on the recommendation of the National Debt Commissioners that those who were unvaccinated were more liable to contract small-pox and die from it than were the vaccinated.—Mr. HOBHOUSE answered: Annuities are granted on the same terms to vaccinated and unvaccinated persons. The applicant for an annuity is not required to furnish any evidence as regards health.

Mr. SNOWDEN also asked the right honourable gentleman whether his attention had been drawn to the fact that many of the principal life insurance offices did not now make any difference in the rates charged on the lives of unvaccinated as compared with vaccinated persons; whether he would state on what date the National Debt Commissioners recommended the differential treatment of unvaccinated persons as compared with the vaccinated under the life insurance scheme of the Post Office; whether he was aware that conscientious objection to vaccination had been recognised by the State since 1898; and whether he was aware that life insurance companies which did not impose restrictions of the character mentioned upon the assured were getting business which would otherwise be done through his department.—Mr. HOBHOUSE replied: I am aware that there is a diversity of practice amongst the life insurance offices with regard to the acceptance of proposals for life insurance from unvaccinated persons. The question of the acceptance of an unvaccinated person under the life insurance scheme of the Post Office first arose about two years ago.

WEDNESDAY, APRIL 22ND.

Cancer Research.

Captain FABER asked the Prime Minister whether, seeing that the disease of cancer had nearly doubled itself in the 30 years ending in 1910, and that the research into the disease was very costly, he would apportion a certain sum yearly for cancer research.—Mr. HERBERT LEWIS (Parliamentary Secretary to the Local Government Board) replied: A very large sum has been expended from voluntary sources for this purpose, and as at present advised my right honourable friend is not inclined to propose to the Treasury a State grant. He would, however, be glad to consider any representation on the subject which may be made by the honourable Member and others.

The Milk-Supply.

Mr. ASTOR in the evening proposed a motion calling attention to the unsatisfactory state of legislation and administration with reference to the milk-supply.

Mr. H. SAMUEL (President of the Local Government Board), in replying to the discussion, said that in a Bill which he would introduce before long a clause would provide that the Board of Agriculture should apply to imported milk similar restrictions to those imposed on home milk. In regard to compensation paid to farmers for the slaughter of tuberculous cows, it was recognised by the Board that the present form of Order was inadequate. The Board were on the point of issuing an amending Order which would grant compensation on more generous terms and assist the local authorities in their expenses in administering the Order. It was also necessary to trace back the tuberculous milk to the cow. The present provisions were most inadequate, and it was necessary to amend the law in that regard. In addition to tuberculosis, it was recognised that enteric fever, scarlet fever, and diphtheria were communicated by milk, and epidemics continued to be caused by infected milk. Further, dirty milk had a considerable bearing on the rate of infant mortality. All these matters needed to be dealt with. His department held the strongest view that it was essential that further measures should be taken to safeguard the health of the community. The law as to adulteration also required strengthening. Any Bill introduced should supersede the various local codes by uniform provisions. The Bill he hoped to introduce very shortly would be modified as compared with the Government's previous Bill so as to meet objections. The powers conferred were much more restricted. He proposed that the making of regulations should not rest with the Local Government Board alone, but that wherever the regulations touched the interests of farmers the concurrence of the Board of Agriculture should be required. Milksellers would be registered in order that their premises might be inspected, but he did not propose that they should be licensed. As to tuberculous milk he would take full powers to trace back the milk to its source and to deal effectively with the cows. He agreed that cost should not be imposed on the farmers. It was not a question of cost but of care. The Bill would enable samples of milk to be taken at any stage from the cow to the consumer. It would insist on the local authorities performing their duties, and the new grants in aid of rates ought to assist. Finally, it was hoped by the Bill to obtain uniformity in the law. As to certified milk, he would leave that open to be proposed as an amendment to the Bill if desired.

Appointments.

Successful applicants for vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

CROSSE, R. E., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Referee under the Workmen's Compensation Act, 1906, attached more particularly to the Wandsworth County Court in County Court Circuit No. 45, to act also for the Reading, Newbury, Farnham and Aldershot, and Chertsey County Courts, and one of the Medical Referees for County Court Circuit No. 52, attached more particularly to the Hungerford County Court.

HARWOOD-HARDMAN, FREDERICK, M.D. Edin., has been appointed Honorary Radiologist to the Croydon General Hospital.

HORTON, THOMAS, M.D., B.S. Durh., M.R.C.S., L.R.C.P. Lond., has been appointed Honorary Consulting Surgeon to the Torbay Hospital, Torquay.

JONES, HERBERT, L.R.C.S. Irel., D.P.H. Camb., has been appointed President of the Society of Medical Officers of Health.

MASTERMAN-WOOD, JAMES LEY, M.B., Ch.B. Edin., has been appointed Honorary Anæsthetist to the Torbay Hospital, Torquay.

NALL, JOHN FREDERICK, M.D. Durh., F.R.C.S. Eng., L.R.C.P. Lond., has been appointed Honorary Anæsthetist to the Torbay Hospital, Torquay.

SCRASE, J. J. SHEAT, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Scattered Homes by the Newton Abbot (Devon) Board of Guardians.

SPONG, AMBROSE, M.D. Manch., Ch.B., F.R.C.S. Eng., has been appointed Honorary Surgeon to the Torbay Hospital.

TAYLOR, WILLIAM PEACH, L.M.S.S.A., has been appointed Honorary Surgeon to the Bristol Eye Dispensary.

WILLIAMS, RICHARD, L.R.C.P. Edin., M.R.C.S., has been appointed one of the Medical Referees under the Workmen's Compensation Act, 1906, for County Court Circuit No. 29.

ERRATUM.—The announcement was made on April 4th that Dr. William Macewen had been appointed Epidemiologist to the Metropolitan Asylums Board. Dr. Macewen was appointed on April 1st, 1914, as a Temporary Medical Assistant in the Public Health Department of the London County Council, and we regret the appearance in our columns of the erroneous notice.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ARGYLL, COUNTY OF.—Assistant County Medical Officer and Executive Tuberculosis Officer. Salary £300 per annum.

BARNSLEY, BECKETT HOSPITAL AND DISPENSARY.—Second House Surgeon, unmarried. Salary £100 per annum, with apartments, board, and laundry.

BARROW-IN-FURNESS, NORTH LONSDALE HOSPITAL.—House Surgeon. Salary £120 per annum, with residence, board, and laundry.

BEDFORD COUNTY HOSPITAL.—Assistant House Surgeon. Salary £80 per annum, with board, lodging, and laundry.

BETHNAL GREEN INFIRMARY AND WORKHOUSE, Cambridge Heath, E.—Assistant Medical Officer. Salary at rate of £120 per annum, with apartments, board, and washing.

BIRKENHEAD UNION INFIRMARY.—Senior Resident Assistant Medical Officer. Salary £150 per annum, with board, apartments, &c.

BIRMINGHAM CITY HOSPITAL, Lodge-road.—Assistant Resident Medical Officer. Salary £160 per annum, with board, residence, &c.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—Resident Medical Officer and Resident Surgical Officer. Salary £80 per annum each, with board, washing, and attendance.

BIRMINGHAM, QUEEN'S HOSPITAL.—House Surgeon for six months. Salary at rate of £50 per annum, with board, lodging, and washing.

BIRMINGHAM UNION.—DUDLEY-ROAD INFIRMARY: Resident Assistant Medical Officer. Salary £150 per annum, with apartments, rations, laundry, and attendance.

BOMBAY, BARODA, AND CENTRAL INDIA RAILWAY.—Medical Officer. Salary Rs.500 per calendar month.

BRADFORD CHILDREN'S HOSPITAL.—House Surgeon. Salary £120 per annum, with board, residence, and laundry.

BRADFORD ROYAL INFIRMARY.—House Surgeon, unmarried. Salary £100 per annum, with board, residence, and washing.

BRIGHTON PARISH POOR-LAW INSTITUTION, Elm Grove.—Resident Assistant Medical Officer, unmarried. Salary at rate of £140 per annum, with furnished house, rations, &c.

BRIGHTON, ROYAL SUSSEX COUNTY HOSPITAL.—Honorary Medical Clinical Assistant and Honorary Surgical Clinical Assistant.

BRISTOL CITY ASYLUM.—Second Assistant Medical Officer, unmarried. Salary £200 per annum, with apartments, board, washing, and attendance.

BRISTOL CITY TUBERCULOSIS SCHEME.—Assistant Medical Officer. Salary £200 per annum, with board, rooms, and attendance.

BROADMOOR, CROWTHORNE, BERKS, STATE CRIMINAL LUNATIC ASYLUM.—Junior Assistant Medical Officer, unmarried. Salary £225 per annum, with quarters, coal, gas, and attendance.

BURNLEY, VICTORIA HOSPITAL.—Second House Surgeon for six months. Salary at rate of £100 per annum, with residence, board, and washing.

BURY INFIRMARY.—Junior House Surgeon. Salary £100 per annum, with board, residence, and washing.

CARLISLE NON-PROVIDENT DISPENSARY.—Resident Medical Officer. Salary £200 per annum, with apartments.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Judd-street, St. Pancras, W.C.—House Surgeon. Salary at rate of £50 per annum, with board and residence.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road, W.C.—Resident House Surgeon. Salary £50 per annum, with board and laundry.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Clinical Assistants for three months.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—House Physician. Salary £90 per annum, with board, apartments, and laundry.

CHICHESTER, WEST SUSSEX COUNTY MENTAL HOSPITAL.—Junior Assistant Medical Officer. Salary £200 to £250 per annum, with apartments, board, laundry, and attendance.

DARLINGTON HOSPITAL AND DISPENSARY.—House Surgeon, unmarried. Salary £140 per annum, with board, lodging, and laundry.

DERBY COUNTY ASYLUM, Mickleover, Derby.—Junior Assistant Medical Officer. Salary £200 per annum, with board, lodging, and washing.

DERBY, COUNTY BOROUGH OF.—Junior Assistant Medical Officer of Health. Salary £150 per annum, with board and residence.

DEVONPORT, ROYAL ALBERT HOSPITAL.—House Surgeon, unmarried. Salary £50 for first six months, £75 for second six months, and at rate of £150 per annum during second year. Also Assistant House Surgeon, unmarried. Salary at rate of £75 per annum, with board and laundry.

DEWSBURY AND DISTRICT GENERAL INFIRMARY.—House Surgeon. Salary £120 per annum, with board, residence, and laundry.

DUDLEY, GUEST HOSPITAL.—Senior Resident Medical Officer. Salary £120 per annum, with board, residence, attendance, and washing.

DURHAM COUNTY ASYLUM.—Junior Assistant Medical Officer, unmarried. Salary £200 per annum, with board, lodging, and washing.

DURHAM COUNTY COUNCIL.—Two School Medical Inspectors Salary £300 per annum.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—House Surgeon for six months. Salary at rate of £75 per annum, with board, residence, laundry, &c. Also Medical Officer to Casualty Department for six months. Salary at rate of £100 per annum, with luncheon and tea provided.

ECCLES AND PATRICROFT HOSPITAL.—House Surgeon. Salary £70 per annum, with board, washing, and lodging.

ENNISKILLEN, FERMANAGH COUNTY HOSPITAL.—House Surgeon. Salary £104 per annum.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—House Surgeon for six months. Salary at rate of £75 per annum, with board, residence, and washing.

HALIFAX ROYAL INFIRMARY.—Second House Surgeon and Third House Surgeon, unmarried. Salary £100 and £80 per annum respectively, with residence, board, and washing.

HALIFAX UNION POOR-LAW HOSPITAL, Salterhebble.—Resident Medical Officer. Salary £120 per annum, with apartments, rations, and washing.

HAMPSTEAD GENERAL AND NORTH-WEST LONDON HOSPITAL, Haverstock Hill.—Clinical Assistant to Throat, Nose, and Ear Department for six months.

HASTINGS, EAST SUSSEX HOSPITAL.—House Physician. Salary at rate of £80 per annum, with residence, board, and washing.

HELLINGLY, EAST SUSSEX COUNTY ASYLUM.—Third Assistant Medical Officer, unmarried. Salary £250 per annum, with board, apartments, washing, and attendance.

HOSPITAL FOR EPILEPSY AND PARALYSIS, AND OTHER DISEASES OF THE NERVOUS SYSTEM, Maida Vale, W.—Resident Medical Officer for six months. Salary at rate of £75 per annum, with board, lodging, and washing.

HOSPITAL FOR WOMEN, Soho-square.—Clinical Assistants in Out-patient Department.

HUDDERSFIELD ROYAL INFIRMARY.—Assistant House Surgeon. Salary £80 per annum, with board, residence, and washing.

HUNTINGDONSHIRE COUNTY COUNCIL.—Assistant County Medical Officer and Assistant School Medical Officer (female). Salary £300 per annum.

KENT COUNTY COUNCIL.—Locum Tenens Tuberculosis Officer for four months. Salary at rate of £500 per annum.

KIDDERMINSTER INFIRMARY AND CHILDREN'S HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum and board.

LEEDS GENERAL INFIRMARY.—House Surgeon for six months. Also House Surgeon. Board, residence, and laundry provided in each case. Also Resident Medical Officer for six months at Ida and Robert Arthington Hospitals. Salary £60 per annum, with board, residence, and laundry.

LEEDS, WEST RIDING ASYLUM, Menston.—Fourth Assistant Medical Officer. Salary £200 per annum, with board and apartments.

LEICESTER POOR-LAW INFIRMARY.—First Resident Assistant Medical Officer and Second Resident Assistant Medical Officer. Salary £200 and £150 per annum respectively, with rations, apartments, and washing.

LEICESTER ROYAL INFIRMARY.—Assistant House Surgeon for six months. Salary at rate of £100 per annum, with board, apartments, and washing.

MAIDSTONE, KENT COUNTY ASYLUM.—Fourth Assistant Medical Officer, unmarried. Salary £200 per annum, with quarters, attendance, washing, &c.

MALDON, ESSEX, MALDON UNION.—Medical Officer and Public Vaccinator. Salary £80 per annum.

MANCHESTER, BAGULEY SANATORIUM FOR TREATMENT OF TUBERCULOSIS.—Assistant Medical Officer. Salary £200 per annum, with board and residence.

MANCHESTER CHILDREN'S HOSPITAL (OUT-PATIENTS' DEPARTMENT), Gartside-street, Manchester.—Senior Medical Officer. Salary £180 per annum. Also Assistant Medical Officer for six months. Salary £50 per annum.

MIDDLESBOROUGH, NORTH ORMESBY HOSPITAL.—Assistant House Surgeon. Salary at rate of £100 per annum first six months and £110 per annum afterwards, with board, apartments, washing, and attendance.

NATIONAL HOSPITAL FOR DISEASES OF THE HEART, Westmoreland-street, W.—Assistant Dental Surgeon.

NATIONAL SANATORIUM, Benenden, Kent.—Assistant Medical Officer. Salary £120 per annum, with board, residence, and laundry.

NEWARK-UPON-TRENT HOSPITAL.—Resident Medical Officer, unmarried. Salary £100 per annum, with board, lodging, and laundry.

NEWCASTLE-UPON-TYNE HOSPITAL FOR SICK CHILDREN.—Honorary Assistant Surgeon. Also Junior Medical Officer for six months. Salary £80 per annum, with board, lodging, and laundry.

NOTTINGHAM CITY ASYLUM.—Locum Tenens Assistant Medical Officer for about three months. Salary £5 5s. per week, with apartments, board, and washing.

NOTTINGHAM GENERAL HOSPITAL.—Assistant House Physician. Salary £100 per annum, with board, residence, and laundry.

OLDHAM ROYAL INFIRMARY.—Senior House Surgeon and Second House Surgeon for six months. Salary £140 and £120 per annum respectively, with residence, board, and laundry.

PADDINGTON GREEN CHILDREN'S HOSPITAL, London, W.—House Physician and House Surgeon for six months. Salary at rate of £52 10s. each per annum, with board and residence.

PEMBROKESHIRE EDUCATION AUTHORITY.—Assistant School Medical Officer. Salary £300 per annum.

PETERBOROUGH INFIRMARY AND DISPENSARY.—House Surgeon, unmarried. Salary at rate of £120 per annum, with residence, board, and laundry.

PORTSMOUTH CORPORATION MENTAL HOSPITAL.—Assistant Medical Officer, unmarried. Salary £225 per annum, with board, apartments, attendance, and washing.

PORTSMOUTH WORKHOUSE INFIRMARY, WORKHOUSE, AND CHILDREN'S HOME.—Second Assistant Resident Medical Officer, unmarried. Salary £130 per annum, with apartments, rations, &c.

PRESTON ROYAL INFIRMARY.—Resident Medical and Surgical Officer, unmarried. Salary £150 per annum, with board, residence, and laundry.

PRINCE OF WALES'S GENERAL HOSPITAL, Tottenham, N.—Pathologist. Salary 120 guineas per annum. Also Honorary Medical Registrar.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, N.W.—Assistant Resident Medical Officer for four months. Salary at rate of £50 per annum, with board, residence, and washing.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney-road.—House Physician for six months. Salary at rate of £80 per annum, with board, residence, and washing.

READING, ROYAL BERKSHIRE HOSPITAL.—Second House Surgeon for six months. Salary at rate of £80 per annum, with lodging, board, and washing.

ROCHDALE INFIRMARY.—Senior House Surgeon, unmarried. Salary £110 per annum, with board, residence, and laundry.

ROTHERHAM HOSPITAL.—Assistant House Surgeon. Salary £100 per annum, with board, lodging, and washing.

ROYAL INSTITUTE OF PUBLIC HEALTH, Russell-square, W.C.—Assistant Director of the Bacteriological Laboratories. Salary £250 per annum.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN, S.E.—Honorary Physicians.

ST. MARK'S HOSPITAL FOR CANCER, FISTULA, AND OTHER DISEASES OF THE RECTUM, City-road, E.C.—House Surgeon. Salary £80 per annum, with board, lodging, and washing.

ST. PANCRAS SOUTH INFIRMARY AND WORKHOUSE, Pancras-road.—Senior Assistant Medical Superintendent and Senior Assistant Medical Officer. Salary at rate of £175 per annum, with residential allowances.

SALISBURY INFIRMARY.—Assistant House Surgeon, unmarried. Salary £75 per annum, with apartments, board, lodging, and washing.

SHEFFIELD, EAST END BRANCH OF THE CHILDREN'S HOSPITAL.—House Surgeon for Out-patient Department. Salary £100 per annum, with board and residence.

SHEFFIELD ROYAL INFIRMARY.—Ophthalmic House Surgeon for six months. Salary £80 per annum, with board and residence.

SHEFFIELD, SOUTH YORKSHIRE ASYLUM, Wadsley.—Locum Tenens Assistant Medical Officer for five months. Salary £5 5s. per week, with apartments, board, and attendance.

SHEFFIELD UNION HOSPITAL, Firvale.—Resident Assistant Medical Officer, unmarried. Salary £140 per annum, with apartments, rations, &c.

SOUTHAMPTON, ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Junior House Surgeon. Salary at rate of £100 per annum, with rooms, board, and washing.

STOCKPORT, COUNTY BOROUGH OF.—Tuberculosis Officer. Salary £400 per annum.

TOTTENHAM EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary £300 per annum.

TRINIDAD, BRITISH WEST INDIES.—Three Medical Officers required to Conduct Campaign against Ankylostomiasis. Medical Officer in Charge, salary £600 per annum. Two Assistant Medical Officers, salaries £400 per annum.

TUNBRIDGE WELLS GENERAL HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board, residence, &c.

WALSALL AND DISTRICT HOSPITAL.—Senior House Surgeon and Assistant House Surgeon. Salary £150 and £110 per annum respectively, with board, residence, and laundry.

WARRINGTON, LANCASHIRE COUNTY ASYLUM, Winwick.—Locum Tenens Medical Officer, unmarried, for about five months. Salary 6 guineas per week, with board, apartments, attendance, and washing.

WEST HAM UNION SICK HOME, Forest-lane, Forest Gate.—Second Assistant Resident Medical Officer. Salary £160 per annum. Also Female Assistant Medical Officer at Workhouse, Union-road, Leytonstone, N.E. Salary £140 per annum.

WEST LONDON HOSPITAL, Hammersmith, W.—Ophthalmic Surgeon. Also Resident Casualty Officer for six months. Board, lodging, and laundry provided.

WIGAN, ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY.—Junior House Surgeon. Salary £100 per annum, with board, apartments, and washing.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Resident Medical Officer. Also Two House Surgeons for six months. Salary in each case at rate of £125 per annum, with board, rooms, and laundry.

WREXHAM INFIRMARY.—Resident House Surgeon. Salary £120 per annum, with board, lodging, and washing.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of a vacancy for a Certifying Surgeon under the Factory and Workshop Acts at Llanwrtyd Wells, in the county of Brecknock.

Births, Marriages, and Deaths.

BIRTHS.

DAVIS.—On April 20th, at Darelan, West Heath Drive, Hampstead, the wife of Edward D. Davis, F.R.C.S., of a son.

MCALLUM.—On April 15th, at Scotswood, Milford-on-Sea, the wife of J. H. McAllum, M.R.C.S., of a daughter.

SLATER.—On April 14th, at Holme Top House, Bradford, Yorkshire, Ella (neé Beales), the wife of B. Holroyd Slater, B.A., M.B., F.R.C.S., of a daughter.

MARRIAGES.

FOWLER—STONE.—On April 18th, at All Saints', Isleworth, Middlesex, Oliver H. Fowler, M.R.C.S. Eng., to Helen Grace Stone, daughter of C. Stone, Lancing, Worthy-road, Winchester.

WALKER—HARDING.—On April 15th, at Woodford Parish Church, Gerald Walker, M.A., M.B., D.P.H. Cantab., to Gertrude, second daughter of Mr. and Mrs. Charles F. Harding, of Churchfields, Woodford.

DEATHS.

GRIFFITHS.—On April 17th, at Ferncoombe, Bournemouth, Thomas Druslyn Griffiths, M.D. Lond., D.Sc. Oxon., in his 78th year.

LEES.—On April 15th, at South-side, Clapham Common, S.W., suddenly, Dr. Joseph Lees.

MATCHETT.—On April 15th, at Nether Stowey, Anwyl Charles Matchett, M.B., C.M., aged 45.

PEARSE.—On April 14th, 1914, at Torquay, Thomas Fredk. Pearse, M.D., F.R.C.S. Eng., late Medical Officer of Health, Calcutta, aged 57 years. Indian papers please copy.

WILLIAMS.—On April 20th, at Bennett Park, Blackheath, Hutchins Williams, M.D. Edin., M.R.C.S. Eng., L.R.C.P. Lond., in his 87th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

"GUY'S MEN."

THERE are few things more helpful to the continuance of worthy effort than a long line of honourable tradition of achievement, fostered in each succeeding generation by the presence of a standing object lesson rather than by precept. The plan which has been adopted at Guy's Hospital of collecting and placing in special bookcases near the entrance to the Wills library books written by Guy's men is calculated to subserve this end and is worthy of commendation and imitation elsewhere. Mr. William Wale, librarian of Guy's Hospital, has contributed to the Guy's Hospital Reports (Guy's Hospital Reports, 1913, vol. lxvii. (reprint)) an annotated list of these books, including under the term Guy's men "those who have at any time been connected with the hospital, either as students or in an official capacity." Garrison ("Richard Bright's Travels in Lower Hungary; a Physician's Holiday," *Johns Hopkins Hospital Bulletin*, June, 1912) has pointed out that the special achievement of the men of Guy's lay in the department of original descriptions of disease. Addison's description of suprarenal disease, Bostock's—the first complete one—of hay fever, Bright's penetrating observation not only of morbus brightii, but of acute yellow atrophy of the liver and other conditions, Hodgkin's account of the disease that bears his name, all so philosophic in breadth of grasp, Pavy's researches on diabetes, Wilks's descriptions of post-mortem appearances in disease, not to mention more recent work of many still among us, at once come to mind. But Mr. Wale's notes furnish us also with some interesting items of medical gossip. In the matter of "records," Thomas Bell (1792–1880), of Guy's, according to Sir John Erichsen, was the first to apply the general rules of surgery to the art of dentistry, while Joseph Fox, also of Guy's, was probably the first dentist in England to write a scientific work on the teeth (1803) and give lectures at a medical school. To Guy's also belongs the honour of having furnished the first trials in this country of static electricity in disease (Addison and Golding-Bird, 1837), the first gastrostomy in England (Cooper Forster, 1858), the first discovery of albuminous urine in puerperal eclampsia (J. C. W. Lever, 1843), the first publication of annual hospital reports, the first President of the Royal Medico-Chirurgical Society (Williams Saunders, 1805) and of the Epidemiological Society (Dr. Babington, jun.), and the first course of lectures in English on medical jurisprudence (Alfred Swaine Taylor, 1831). There is in the library, it need hardly be said, a complete series of the poetical works of John Keats; also a life of the Rev. Frederick Denison Maurice, who was chaplain to Guy's from 1836-46. It is worthy of note that Thomas Hodgkin was offered the Fellowship of the Royal College of Physicians in 1836, but declined to accept an honour which, in his opinion, created an invidious distinction; while equally noteworthy is the fact that when Golding-Bird, at the age of 21, submitted himself for examination for the L.S.A., that body, in view of his already established reputation, declined to examine him and conferred its licence on him with "the honours of the court." We learn also that the founder of the hospital, Thomas Guy, has at least thrice been credited with saintship, for "St. Guy's Hospital" is referred to in the register of Deadman's Place Meeting House (1758), in an essay by Thomas Sutton, M.D. (1813), and in a letter from Sir Robert Peel, then Prime Minister, to Queen Victoria (1845). But Mr. Cuthbert Golding-Bird, who points out the first of these mistakes, incontinently makes a knight instead of a saint of him—Sir Thomas Guy, knight. A very interesting note is Sir Astley Cooper's estimate of himself, found among his private papers after his death: "Sir A. Cooper," it reads, "was a good anatomist, but never was a good operator where delicacy was required. He felt too much before he began, ever to make a perfect operator. Quickness of perception was his forte, for he saw the nature of disease in an instant, and often gave offence by pouncing at once upon his opinion. The same faculty made his prognosis good. He was a good anatomist of morbid as well as of natural structure. He had an excellent and useful memory. In imagination he was vivid. His principle in practice was never to suffer any who consulted him to quit him without giving them satisfaction on the nature and proper treatment of their case. My own success depended upon my zeal and industry, but for this I take no credit, as it was given to me from above." A note of striking present interest is on the flyleaf of Dr. Robert John Thornton's "Easy Introduction to the Science of Botany" (1823): "This book contains a singular discussion as to whether it is decent to teach girls botany, seeing that plants have sexual organs and functions."

"ON A BUSINESS FOOTING."

A WELL-KNOWN consulting surgeon recently received the following communication, type-written, from a person of whom he had never previously heard. We suppress all names, but publish the letter as a good illustration of the profound belief that some members of the public have in the venality of the doctor.

> DEAR SIR,—Dr. A——, of B——, has advised me to write to you to inform you that I am willing to receive a delicate lady or convalescent patient, with or without nurse companion, as paying guest. —— House is delightfully situated, standing high in own grounds, commanding superb views over moorlands. Good tennis-court, orchard, flower garden, and meadows. Young companionship with my daughters, who speak perfect idiomatic French, and would coach in same. We are ten minutes from C——, and close to beautiful inland country and scenery. Close to golf and tennis clubs. Hunting with two packs. Good sea and river fishing. We live exceedingly well and most liberal table kept. I myself had hospital training many years ago, and all my life had much experience with illness and nursing, and would ensure that a delicate guest received every care and attention.
>
> Our climate is mild in winter. ..... We have an invigorating mixture of sea and moorland air which is restful and yet health-giving for convalescents or nerve patients, who rapidly regain health and strength. ..... Dr. A—— will be pleased at any time to answer questions and act as referee, and we are also well known to, and personal friends with, the Vicar of D——, who would also act as referee.
>
> I might mention that in return for any kind assistance you may give me by recommendation and sending me patients, I should like all to be on a business footing and for there to be a liberal commission on every guest—a definite fee to you on arrival of guest, followed by regular weekly commission throughout the visit. Trusting that you may be able to send me guests (I am willing to take two, but not more),
>
> Yours faithfully, (Lady) —— ——.

We are perfectly certain that Lady —— has no idea that her letter is a concentrated insult. From her point of view she is making an ordinary commercial offer.

PLANE TREES AND DISEASE.

WE observe that this week the question has been again raised whether the broken fruit spicules of the plane trees floating in the air in parts of London give rise to inflammation of the eyes and air passages. We referred at some length to this question in an annotation published in THE LANCET of May 14th, 1910, p. 1363, when we said that the evidence adduced was far from convincing, although there was nothing inherently improbable in the suggestion. At the same time we hoped that the character of these trees would be vindicated, as they grow well in London and are a welcome addition to our streets and parks.

THE LEBANON HOSPITAL FOR THE INSANE.

THE efforts of Mr. Theophilus Waldemeier, the founder of the Brumana station of the Friends' Foreign Missionary Society, warmly seconded by workers of all nationalities in Syria and by many friends in England, America, Switzerland, and elsewhere, resulted in the opening of the Asfuriyeh Asylum in August, 1900. This is to this day the only hospital for the insane in Syria or Palestine, and no other on a similar plan exists in the Ottoman Empire, though several hospitals in the capital have wards for the insane. The hospital property, of 36 acres, is situated about five miles from Beirut, at an elevation of some 400 feet above the sea, in a most healthful region, and has a good supply of water. It has now accommodation for 100 patients. A new building is being erected for 30 more men. The hospital is always overcrowded, and men and women have constantly to be turned away. Last year 201 patients enjoyed the benefits of this hospital, of whom 95 were remaining from the preceding year. Of the 106 new cases, 66 were men and 40 women. 103 remained at the end of the year under consideration. Of the other 98, 24 were discharged cured, 18 improved, 40 unimproved, while 14 died. Two others admitted were found to be not insane. In the 12 years from its opening to 1912, over 1000 patients have been received, of whom 290 have recovered and 241 have been dismissed improved. This 1000 represent a wide geographical area, for besides the large number from the Lebanon district and Beirut, many have come from Damascus, Sidon, Baalbek, Tarsus, Cæsarea, Adana, Marash, Aleppo, Egypt, Cyprus, and further away. They represent many religions, too. Thus, there have been 364 orthodox, 289 Maronites, 161 Moslems, 86 Jews, 84 Roman Catholics, 62 Protestants, 13 Druses, and 6 Armenians. These figures show the international and undenominational nature of the enterprise. The executive committee of the hospital is in Beirut, and consists of

Dr. Webster, Dr. Moore, Dr. Graham, Dr. Adams, and Dr. Hoskins. This committee works in connexion with a general committee in London, of which Miss A. M. Gooch is the general secretary. The income from invested funds is £230 annually, and the annual subscriptions and donations amount to £1230. In spite of the fact that one-third of the patients are utterly destitute and another third pay extremely little, the income from patients stands at £2070, a most encouraging showing. Yet it will be seen that these amounts are far too small for an institution of the size and possibilities of this one. Another £1040 yearly is very much needed.

THE PRINTING AND ALLIED TRADES EXHIBITION.

THIS exhibition, to be opened at the Royal Agricultural Hall by the Lord Mayor of London on May 13th, will be the largest and most representative exhibition of its kind ever held, every available space in the Great Hall, the Gilbey Hall, King Edward's Hall, and the galleries being occupied with exhibits strictly appertaining to the graphic arts. New machinery and appliances will be shown alike interesting to the expert and the general public, in addition to a very fine display of specimens of printing by all processes, including photogravure. The exhibition has the support of the various societies associated with the printing and allied trades, and most firms of repute in the industries represented are co-operating, we understand, to make this quadrennial exhibition a success.

"VIROLAX."

IN our analytical report of this preparation last week we stated that analysis gave 36 per cent. of total unsaponifiable oil (petroleum). This result is by weight, which substantiates the claim that virolax contains approximately 50 per cent. by volume of petroleum.

Parathalassa.—Theocin-sodio-acetate, or, to give it its full name, theophylline-sodium-sodio-acetate, is a compound of sodium acetate and theophylline (di-methyl xanthine), an alkaloid obtained by synthesis (patented) and called generally theocin, which is isomeric with theobromine. (Reported favourably upon for œdema and dropsy of cardiac origin and as seldom causing unpleasant effects.) Theobromine sodium salicylate (diuretin) is a compound of the true theobromine with sodium salicylate, a diuretic which given in small doses causes sleeplessness without affecting the nervous system. It has been described as a safe diuretic in scarlatinal dropsy of children. These preparations are generally conceded to be more powerful diuretics than the ordinary tartrates, acetates, and citrates.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

A DIARY OF CONGRESSES.

WE shall publish this diary from time to time that our readers may have under their hands the dates of the approaching scientific Congresses. It is unnecessary to issue the lists of all these functions week by week, and we propose to make only such gatherings as will occur in the immediate future the subject of regular announcement. The following Congresses, Conferences, and Exhibitions are announced:—

April 27th-May 1st (London, Royal Horticultural Hall).—Nursing Conference and Exhibition.
May 1st-Nov. 1st (Lyons).—International Town Hygiene Exhibition.
,, 15th-Oct. 15th (Berne).—Swiss National Exhibition.
,, 18th-21st (London, Imperial Institute).—Victoria League Imperial Health Conference.
May-October (London, Shepherd's Bush).—Anglo-American Exposition.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 22nd, 1914.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation. Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
April 16	30·51	N.E.	...	100	59	39	43	46	Fine
,, 17	30·27	S.E.	...	106	60	43	48	51	Cloudy
,, 18	30·10	S.E.	...	107	61	46	47	53	Fine
,, 19	30·23	S.E.	...	111	68	46	48	52	Fine
,, 20	30·29	E.	...	111	73	46	49	54	Fine
,, 21	30·34	S.E.	...	107	74	49	49	58	Fine
,, 22	30·22	S.	...	85	65	54	53	57	Cloudy

The following journals, magazines, &c., have been received:—Journal of Nervous and Mental Disease, Medical Chronicle, British Journal of Dental Science, American Journal of Orthopedic Surgery, American Medicine, Therapist, London Hospital Gazette, Quarterly of the Federation of State Medical Boards of the United States, Indian Medical Record, Revista Especialidades Médicas, British Dental Journal, Journal of Obstetrics and Gynæcology of the British Empire, Surgery, Gynecology and Obstetrics, Archives of Pediatrics, Office International d'Hygiène Publique, Knowledge, &c.

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY, Burlington House, London W.

THURSDAY.—Dr. J. C. Willis: On the Lack of Adaptation in the Tristichaceæ and Podostemaceæ (communicated by Dr. D. H. Scott, foreign secretary to the Royal Society).—Mr. R. P. Gregory: On the Genetics of Tetraploid Plants in Primula Sinensis (communicated by Prof. W. Bateson).—Mr. J. A. Gunn: The Action of Certain Drugs on the Isolated Human Uterus (communicated by Prof. C. S. Sherrington).—Prof. B. Moore: The Presence of Inorganic Iron Compounds in the Chloroplasts of the Green Cells of Plants, considered in Relationship to Natural Photo-synthesis and the Origin of Life.—Mr. D. J. Lloyd: The Influence of Osmotic Pressure upon the Regeneration of Gunda Ulvæ (communicated by Prof. J. S. Gardiner).—Surgeon-General Sir D. Bruce, Major A. E. Hamerton, Captain D. P. Watson, and Lady Bruce: (1) Glossina Brevipalpis as a Carrier of Trypanosome Disease in Nyasaland; (2) Trypanosome Diseases of Domestic Animals in Nyasaland. Trypanosoma Pecorum—Part III., Development in Glossina Morsitans.

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street, W.

MONDAY.

SECTION OF ODONTOLOGY (Hon. Secretaries—Robert McKay, F. Coleman): at 8 P.M.

Casual Communications:

By Mr. W. H. Dolamore, Mr. G. Northcroft, Mr. F. N. Doubleday, Mr. H. C. Visick, Mr. Wm. de C. Prideaux.

TUESDAY.

SECTION OF MEDICINE (Hon. Secretaries—H. Batty Shaw, John Fawcett): at 5.30 P.M.

Dr. E. P. Poulton: Observations on CO_2 in Alveolar Air of Diabetics, especially in Relation to Onset of Coma, with Demonstration of Fridericia's Method of Measuring it Clinically.

Dr. F. Parkes Weber: (1) Aplastic Anæmia; (2) Multiple Superficial Linear Ulceration of the Stomach.

Dr. J. A. Braxton Hicks: A Pedunculated Intratracheal Tumour (Sarcoma) causing Bronchiectasis.

FRIDAY.

SECTION OF LARYNGOLOGY (Hon. Secretaries—H. A. Peters Cecil I. Graham): at 4 P.M.

Annual Meeting.—Election of Officers and Council for Session 1914-1915.

Cases:

Will be shown by Dr. Milligan, Dr. Jobson Horne, Dr. E. A. Peters, and others.

(The SEMON LECTURE (University of London) will be given on May 22th by Professor Killian (of Berlin) on Suspension Laryngoscopy.)

SECTION OF ANÆSTHETICS (Hon. Secretaries—H. E. G. Boyle, Cecil Hughes): at 8.30 P.M.

Paper:

Dr. Goodman Levy: Sudden Death under Chloroform Anæsthesia.

MEDICAL SOCIETY OF LONDON, 11, Chandos-street, Cavendish-square, W.

MONDAY.—8.30 P.M., Dr. P. Stewart: Recent Treatment of Cerebro-Spinal Syphilis and General Paralysis.

HARVEIAN SOCIETY OF LONDON, Stafford Rooms, Titchborne-street, Edgware-road, W.

THURSDAY.—8.30 P.M., Paper:—Mr. E. Clarke: Errors in Diagnosis and Treatment in Ophthalmic Practice.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY, West London Hospital, Hammersmith-road, W.

FRIDAY.—8 P.M., Members are invited to show cases. Paper:—Dr. F. G. Crookshank: Exophthalmic Goitre, its Pathogeny and Treatment.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C.

MONDAY.—5 P.M., Mr. Shattock: Specimens illustrating Papilloma and Adenoma. (Museum Demonstration.)

FRIDAY.—5 P.M., Prof. Keith: Various Forms of Peritoneal Adhesions, Bands, and Mesenteries. (Museum Demonstration.)

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Dr. Simson: Diseases of Women. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Armour: Operations. Dr. Pritchard: Bacterial Therapy Department. 2.30 P.M., Mr. B. Harman: Diseases of the Eye.

TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Baldwin: Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. Dr. Pernet: Diseases of the Skin.

WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Pardoe: Operations. Dr. Simson: Diseases of Women.

THURSDAY.—9 A.M., Dr. Bernstein: Bacterial Therapy Department. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Armour: Operations. Mr. B. Harman: Diseases of the Eye.

FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Baldwin: Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. Dr. Pernet: Diseases of the Skin.

SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Pardoe: Operations.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.

MONDAY.—Out-patient Demonstrations:—10 A.M. Dr. H. B. Carlill: Medical. Mr. H. Curtis: Surgical. 12 noon, Mr. G. N. Biggs: Throat, Nose, and Ear.—2.15 P.M., Mr. W. Turner: Surgery. 3 P.M., Mr. W. Turner: Operations. 3.15 P.M., Sir Dyce Duckworth: Medicine. 4.15 P.M., Mr. R. Lake: Ear and Throat.

TUESDAY.—Out-patient Demonstrations:—10 A.M., Medical. Mr. Cole: Surgical. 12 noon, Dr. H. MacCormac: Skin. —2 P.M., Mr. L. McGavin: Operations. 2.15 P.M., Mr. R. Carling: Surgery. 3.15 P.M., Dr. G. Rankin: Medicine. 4.15 P.M., Sir Malcolm Morris: Skin. 4.30 P.M., Special Lecture:—Mr. A. Carless: Renal Emergencies.

WEDNESDAY.—Out-patient Demonstrations: 10 A.M., Dr. H. B. Carlill: Medical. Mr. Cecil Rowntree: Surgical. 11 A.M., Mr. R. B. Bickerton: Eye.—2 P.M., Mr. L. V. Cargill or Mr. Choyce: Operations. 2.15 P.M., Dr. F. Taylor: Medicine. 3.15 P.M., Mr. Cargill: Eye Clinique. 4.30 P.M., Mr. C. C. Choyce: Surgery.

THURSDAY.—Out-patient Demonstrations:—10 A.M., Dr. H. R. Prentice: Medical. Mr. H. Curtis: Surgical. 12 noon, Mr. G. N. Biggs: Throat, Nose, and Ear.—2 P.M., Mr. R. Carling or Mr. W. Turner: Operations. Dr. A. Davies: Pathological Demonstration. 3.15 P.M., Dr. R. Wells: Medicine. 3.15 P.M., Special Lecture:—Dr. R. Wells: Auricular Fibrillation. 4.30 P.M., Special Lecture:—Mr. J. Cantlie: Affections of the Colon in Tropical Ailments and their Treatment.

FRIDAY.—Out-patient Demonstrations:—10 A.M., Dr. C. E. Zundel: Medical. Mr. Cole: Surgical. 12 noon, Dr. H. MacCormac: Skin. —2 P.M., Mr. L. McGavin: Operations. 2.15 P.M., Sir John Rose Bradford: Medicine. 3.15 P.M., Mr. L. McGavin: Surgery.

SATURDAY.—Out-patient Demonstrations: 10 A.M., Dr. H. R. Prentice: Medical. Mr. Cecil Rowntree: Surgical. 11 A.M., Mr. R. B. Bickerton: Eye.—10 A.M., Col. Barry: Radiography.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, Medical School, City-road, E.C.

MONDAY.—1.30 P.M., Department for the Prevention of Consumption. 2 P.M., Cardiac Department, Dr. Stott; Out-patient Department, Dr. Phear, Dr. S. Thompson. 3 P.M., Wards, Dr. Phear.

TUESDAY.—9 A.M., Laryngological Department, Mr. Mant. 1.30 P.M., Department for the Prevention of Consumption. 2 P.M., Out-patient Department, Dr. M. Leslie, Dr. B. King; Operations, Mr. A. Evans. 3 P.M., Wards, Dr. White. 4 P.M., Wards, Dr. M. Leslie.

WEDNESDAY.—2 P.M., Wards, Dr. A. Davies; Out-patient Department, Dr. Drysdale, Dr. Kellie. 4 P.M., Wards, Dr. Drysdale. 4.30 P.M., Roentgen Ray Department, Dr. Jordan.

THURSDAY.—9.30 A.M., Dental Department, Mr. G. Thomson. 10 A.M., Cardiac Department, Dr. Stott. 1.30 P.M., Department for the Prevention of Consumption. 2 P.M., Out-patient Department, Dr. Phear, Dr. S. Thompson. 4.30 P.M. Laryngological Department, Mr. Mant.

FRIDAY.—1.30 P.M., Department for the Prevention of Consumption. 2 P.M., Wards, Dr. Calvert; Out-patient Department, Dr. M. Leslie, Dr. B. King. 5 P.M., Lecture-Demonstration:—Dr. Drysdale: Myocarditis and its Symptoms.

SATURDAY.—10 A.M., Out-patient Department, Dr. Drysdale, Dr. Kellie. 11.30 A.M., Roentgen Ray Department, Dr. Jordan.

THE THROAT HOSPITAL, Golden-square, W.

MONDAY.—5.15 P.M., Special Demonstration of Selected Cases.
THURSDAY.—5.15 P.M., Clinical Lecture.

LONDON LOCK HOSPITAL, 91, Dean-street, Soho, W.

Special Course of Instruction in Venereal Diseases, for Post-Graduates and Students, with Practical Demonstrations of the Various Methods of Treatment:—

MONDAY.—Clinics:—1 P.M., Mr. Ryall; 6 P.M., Mr. Gibbs. Lecture:—5 P.M., Mr. Gibbs: The Treatment of Acute Gonorrhœa.
TUESDAY.—Clinics —2 P.M., Mr. Lane; 6 P.M., Mr. Paterson.
WEDNESDAY.—Clinic:—6 P.M., Mr. Shillitoe.
SATURDAY.—Clinic:—2 P.M., Mr. McDonagh.

ROYAL SANITARY INSTITUTE, 90, Buckingham Palace-road, S.W.

TUESDAY.—7 P.M., Lecture:—Dr. J. Kerr: Health of the School Child.

MANCHESTER HOSPITALS POST-GRADUATE CLINICS.

TUESDAY.—MANCHESTER AND SALFORD HOSPITAL FOR SKIN DISEASES, Quay-street.—4.30 P.M., Prof. R. B. Wild: Lupus Erythematosus.
WEDNESDAY.—ROYAL INFIRMARY—4.30 P.M., Dr. Tylecote: Demonstration of Medical Cases.
THURSDAY.—ANCOATS HOSPITAL—4.30 P.M., The Honorary Surgical Staff: Demonstration of Cases.
FRIDAY.—ROYAL EYE HOSPITAL.—4.30 P.M., Dr. H. Griffith: Diseases of Cornea.

UNIVERSITY OF SHEFFIELD, at the University.

Post-Graduate Course on Syphilis:—

TUESDAY.—3 P.M., Prof. Dean: Principles of Serum Reactions in General. Ehrlich's Side-chain Theory. Complement Fixation. The Wassermann Reaction.
FRIDAY.—3 P.M., Prof. Dean: Practical Demonstration of Methods of Collecting Blood, and Technique of Wassermann Reaction.

ROTUNDA HOSPITAL POST-GRADUATE COURSES, Dublin.

MONDAY.—10 A.M., Obstetrical Lecture: Version and Extraction. 11 A.M., Examination of Patients and Minor Operations.
TUESDAY.—10 A.M., Major Operations.
WEDNESDAY.—10 A.M., Obstetrical Lecture: Version and Extraction (continued). 11 A.M., Examination of Patients and Minor Operations.
THURSDAY.—10 A.M., Major Operations.
FRIDAY.—10 A.M., Gynæcological Lecture: Pelvic Infection. 11 A.M., Examination of Patients and Minor Operations.

For further particulars of the above Lectures, &c., see Advertisement Pages.

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Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

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